

Published on the 10th of each Month by

**THE INDIA RUBBER PUBLISHING CO.**

TIMES BUILDING, NEW YORK, U. S. A.

JNO. R. DUNLAP.

H. C. PEARSON.

Vol. 12.

AUGUST 10, 1895.

No. 5.

SUBSCRIPTIONS: \$3.00 per year, \$1.75 for six months, postpaid, for the United States and Canada. Foreign countries, same price. Special Rates for Clubs of five, ten or more subscribers.

ADVERTISING: Rates will be made known on application.

REMITTANCES: Should always be made by bank draft, Post Office Orders or Express Money orders on New York, payable to THE INDIA RUBBER PUBLISHING COMPANY. Remittances for foreign subscriptions should be sent by International Post order, payable as above.

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Entered at New York Post Office as mail matter of the second-class.

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**“RUBBER” AND OTHER “INDUSTRIALS.”**

THE disfavor with which the so called “industrial” stocks are regarded by our investors would indicate that the business of manufacturing in the United States is, of all things, the most precarious. Yet if we look anywhere else than to the New York Stock Exchange for information we shall find industrial profits, as a rule, greater and more certain than returns from railroad investments. The manufacturing enterprises represented in the stock quotations, either in number or extent, compared with the whole industrial system of the country, are as but a drop in a bucket, but we cannot assume that only weak or doubtful concerns have registered their shares on the Stock Exchange. In other words these “industrials” probably embrace some of the safest concerns in the United States, though others may be of a character to justify caution. But this is not the view of the average investor, who leaves all the “industrials” alike to the speculator,—with a prayer, let us hope, that in due season the wind may be tempered to the shorn lamb.

We may mention, for illustration, the Rubber stocks which, for nearly three years, have been “listed” on the Stock Exchange. There is reason to believe that the business of the company represented has been good, under safe and judicious management, free from speculative manipulation. The earnings actually distributed have been greater than were promised in the original prospectus of the company, which is unusual, to say the least. Yet the quotations at this writing allow a return of 8.53 per cent.—on the basis of the actual disbursements of dividends for the past year—and the common stock can be sold only at a price yielding a return of more than 6 per cent. If we consider the actual reported earnings of the company—part of which went to swell their surplus—there was enough money handled to pay 12 per cent. on the common stock, figured at current prices.

These low quotations can have no other explanation than in a general discrediting of the class of stocks to which Rubber belongs, and, after all, there is little reason for surprise in this. Only fools buy a pig in a poke; and we may ask what does the average business man know upon which to base an estimate of the value of any “industrial” stock on the market? With the conditions of railroading he has in time become familiar, so that he is willing, perhaps, to trust to his own judgment as to the state of the crops, or to the yield of mines, or to the general business situation, as affecting the earnings of a particular railroad, and thus be guided in the purchase or sale of its securities. But the situation with regard to the “industrials” was indicated in a New York newspaper, when the United States Rubber report was made lately to the Stock Exchange, in the brief comment: “Do you know what these figures mean? Some very bright business men do not.” There is not a man alive who, if he has depended upon the daily newspapers alone, knows what the United States Rubber Co. is, what it exists for, where its factories are, of what importance they are, the method or plan of the organization, how the earnings are computed,

or what one of Treasurer Flint's annual reports means. The public would be just as wise on all these points to day if the company had never been mentioned in print. On the other hand, on account of the universal lack of care in reporting certain classes of news, there has been printed a mass of misinformation, the constant effect of which has been to prejudice the public against this particular company. By the way, it is doubtful whether any financial editor in New York is informed on these points, though these writers are not altogether to blame for their want of information.

It may be urged that the business of the rubber company is to make and sell goods, and not to control prices in Wall street, which is a good point, in the main; yet, it is hard to see why a corporation should, after offering its shares to the public and seeking the prestige which comes from "listing" them on the Stock Exchange, be content to permit the quotation list day after day to advertise the public lack of appreciation of these shares. We do not believe that the India-Rubber, Gutta-Percha, and Telegraph Works Co., Limited, whose stocks are "listed" on the London exchange, would be content under like conditions, or the Vereingte Berlin-Frankfurter Gummiwaaren-Fabriken, "listed" in Berlin. They would as soon be satisfied with an unfavorable rating from a mercantile agency.

The directors of the United States Rubber Co. know the sound basis of the rubber-shoe industry, the certainty of a permanent demand for rubber shoes, the indications of continued profits of the business, the fact that the corporation has full command of the skill and experience of the former managers of the constituent companies, the lack of corporation indebtedness, and the well-systematized character of its selling arrangements; but the outside world does not know these things. Even the outside rubber-men do not all know them. Until another style of reports is adopted by "industrial" corporations, no matter how sound their condition, their shares will be ranked by investors with those of semi-bankrupt, non-dividend-paying railroads. Yet these companies, for the most part, are operated at our very doors, by business men widely and favorably known.

It is interesting, in this connection, to study the stock-lists in London, for instance, where what we call "industrials" far outnumber the railway companies listed, and represent investments on every continent, managed in most cases far away from Capel Court. On the same list in London one may see the shares of an omnibus company in Vienna, a water-works in Odessa, a brewery in Chicago, a ruby-mine in Burma, a flour-mill in Rio Janeiro, a steam-boat company on the Amazon, a tea-plantation in Assam, a telegraph-company on the West Coast of Africa, and a land-improvement company in Texas. Think of such schemes finding investors in Wall street! Undoubtedly those schemes are good, bad, and indifferent, but enough of them are good to sustain the public faith in "industrials," and the basis for faith is such reports—whether compelled by law to be made, we don't know—as are comprehensible by investors.

#### WANTED, A NEW FOREIGN POLICY.

WE have no doubt that the earnest defenders of "the Monroe doctrine" who are heard from time to time are inspired with true American patriotism, and so far they are entitled to praise. But what shall it profit the United States, though the whole world should assent to "the Monroe doctrine," if in the end other nations monopolize the markets of the southern American republics? Since political control has its *raison d'être* in the promotion or protection of commercial interests, so long as any European nation has the unmolested lead in selling goods to Latin America it can be content to leave the political situation in the hands of others.

It seems to escape the notice of our newspapers and publicists, while they are enthusiastically discussing a "foreign policy," that opportunities for the extension of our business interests are continually passing into the control of other peoples. On another page of this month's INDIA RUBBER WORLD two items are recounted with regard to the commerce of the greatest river in the world—the Amazon—that ought to be of some interest in the United States, though we believe that they have not been mentioned in any of our newspapers.

First is the subject of the steam navigation of the Amazon—involving the commerce of a territory nearly as extensive as our own United States—which for years has been monopolized by an English corporation. Some time ago their contract expired, and the Brazilian government seems to have been in no haste to renew it, but, at a recent meeting in London of the corporation referred to, the opinion prevailed that the monopoly of the Amazon would again be placed in their hands for a term of years, and that they would be justified in investing in additional boats some of the heavy reserve which represents a part of their profits in the past. But nothing has been heard of any attempt in the United States to gain a share of this great trade. Have n't we the capital? So great an English authority as Mulhall has only just declared that we are richer than his own country. Can't we build steamboats? We supplied satisfactory steamers for the Amazon trade before the English did, and to-day steamers of American build are plying the Magdalena river, satisfactorily and at a profit. Then have n't we any trade with Brazil? The United States takes more than half her India-rubber and the greater part of her coffee, which alone ought to afford a good reason for our having a share in her transportation system, especially since Brazilians seem content to leave the business to outsiders.

A second item of news is the organization of an English company to build a submarine cable up the Amazon from Pará to Manáos, and the signing of a contract for the work of construction—a subject which has at no time been discussed in American newspapers as one of commercial importance, although we have been forming connections with an interior district up the Amazon now as remote as Chicago would be from New York without telegraph-lines and railways.

(Continued on page 325.)



**PAGE(S)**



**MISSING**



The difference between these footings and the total export of rubber from Assam in each year represents the production of gum in that province. From the report on Assam quoted at the beginning of this article, it would appear that only 192,340 pounds of rubber were actually produced in Assam during the year 1893-94. The government now profits, however, by every pound exported through the province, no matter where gathered. The duty of 12 annas [=36 cents] per maund yielded 52,225 rupees last year. This tax dates from November 1, 1892, when the former system of selling at auction the privilege of gathering rubber was abolished. Under the last ten years of that system the government's average annual income from it was 33,079 rupees.

By the way, interest in rubber-culture has not died out in Assam. During the fiscal year 1892-93 there were cleared 250 acres of new land to be added to the rubber plantation at Charduar, and 600 acres, of new and old land, were set with rubber plants, all of the *Ficus elastica* variety. A large nursery was also opened, and sown with rubber-tree seed for future plantings. At the end of the year the area of the rubber plantation was 2063 acres, embracing 28,546 trees. The expense of the plantation for the year was 15,974 rupees. Last year, after forty-one acres had been planted, with 372 trees, an order came from the government not to extend the work. It is now twenty years since the cultivation of rubber was begun at Charduar, but the work has progressed under numerous difficulties and the greater part of the plantation is yet young. It embraced only 1051 acres eight years ago, and 1771 acres in 1891.

Happily the *Ficus elastica* is not confined to Assam, and the falling-off in that province may yet be made up by Burma—an adjacent British possession which is yet little known. But the figures which follow show how steadily the rubber exports of Burma have increased, the figures relating to pounds:

YEARS.	Assam.	Burma.	Total.
In 1873-74.....	1,820,744	65,184	1,885,748
In 1879-80.....	1,041,696	249,760	1,291,696
In 1887-88.....	700,112	333,424	1,033,536
In 1893-94.....	302,848	774,144	1,076,992

For the past sixteen years the annual average export of rubber from British India has been slightly over 1,000,000 pounds, and the increase of the production in Burma has exactly kept pace with the growing shortage in Assam. But complaints of careless rubber-gathering come also from Burma. In the last administration report received from Rangoon, it is mentioned that "the India-rubber revenue of the Bhamo district showed a considerable falling-off, owing apparently to short supplies of rubber through maltreatment of the rubber-tree." Yet there was no falling-off in the exports, either in weight or in value. Possibly some new method of evading the tax-collector had been discovered. In the preceding government report (1892-93) it was stated that the royalty on rubber during the year, in the Bhamo district, was 219,498 rupees. "The royalty on this product was raised from 8 to 12 annas [per maund] from January 1, 1893, as a result of the inquiries made by the forest officer who visited the Hukong valley in the cold weather of 1891-92. This officer found that the price paid for rubber to the Kachin extractors had increased enormously during the five years, while the price in Rangoon had remained stationary. The royalty was accordingly raised, as it appeared just that the government should receive some share in the increased profits of the Kachins."

We do not know that any practical advantage was ever taken of some experiments directed some years ago by the govern-

ment of Bengal, in what is now the independent province of Assam, but they deserve not to be overlooked. Great pains were taken by the forest department, in 1871 or 1872, to collect some perfectly pure rubber, selecting the best season, and there were sent to Calcutta, of the product, about 21,720 pounds, which brought an extra price, being reported to be superior in quality to any other rubber ever seen in that market. There was another instance, where the government, failing to sell the privilege of gathering rubber one year in Darjeeling, undertook the work on its own account. The rubber was carefully prepared, and is said to have sold at an advance of 40 per cent. over the usual price. The lesson is not that rubber-gathering generally should be in the hands of public officials, but that a slight addition to the labor now expended in the rubber forest might add largely to the cash returns.

#### MALDEN'S CHIEF INDUSTRY AND ITS FOUNDER.

SOME of Malden's finest public buildings have been the direct outgrowth of the rubber industry through the beneficence of the man who stands at the head of that enterprise, Hon. Elisha S. Converse. He has given to the city the fine brown-stone public library, known as the Converse Memorial, in memory of his son. It contains twenty-five thousand volumes and a well-selected art collection. Adjoining the library is the First Baptist Church, of rough granite. To this he was also a generous donor. Another of his benefactions is the Malden Hospital. He gave a tract of high, wooded land as a site, and contributed liberally toward the building. Connected with the hospital is the Nurses' Home, which is a nurses' training-school as well.

Though Malden is surrounded by the finest natural parks, the only improved one of any extent is the one-hundred-acre tract of Pine Banks Park. Though this is private ground, the public have free access to it. Its woods, open grass-plots, hills, and dales form the finest private grounds to be found anywhere. Its principal roads, the Cliff Drive and Ravine Drive, attract coaching parties from all the surrounding towns, and even from Boston. The most conspicuous feature of this park is Mount Ephraim, which rises 600 feet above sea-level. From this point the ocean may be seen eight miles to the east, and it commands a view of four counties. A stone observatory is to be erected upon this summit.

Nestling close by the side of Pine Banks Park is the huge factory which forms part of the plant of the Boston Rubber Shoe Co. At some distance to the south is their other large building. Instead of disfiguring the landscape, these symmetrical buildings rather lend stately grace, and suggest the substantial foundation of the prosperity of this well-nigh model manufacturing community. For out of Malden's 32,000 population 10,000 are connected with or dependent upon the rubber works. Over 3000 are operatives.

The output of these factories is 53,000 pairs of boots and shoes a day, exceeding that of any other company in the world, and the business is world-wide; for foreign orders consume a considerable part of the yearly output of 15,000,000 pairs. Forty-two years ago, when the company was first organized the old Edgeworth mill turned out but 600 pairs a day. The capitalization of the company was then \$75,000; now it is \$5,000,000.

Mr. Converse has been the directing genius of the company from the first. He is a native of Needham, Mass., and was born July 28, 1820. He has been a resident of Malden since 1850, and in 1882, when it became a city, he was its first mayor. Malden is proud of her principal industry and the man who has made it.—*Leslie's Weekly, New York,*

## BRIEF ABSTRACTS OF RECENT RUBBER PATENTS.

**A**MONG recent patents issued by the United States Patent Office, embodying applications of India-rubber or Gutta-percha to a greater or less extent, have been the following. It is not practicable here to do more than to note the use of rubber in each case, with sufficient detail to enable those who are interested to decide whether or not to look into any particular patent more fully:

## TIRES.

No. 541,075.—Pneumatic Tire. Charles H. Davids, Brooklyn, assignor of one-half to John Stewart, New York, N. Y.

The combination with a wheel rim provided with recesses for receiving a pneumatic tire, of a pneumatic tube having its corners adapted to engage the recesses, the corners having concave recesses therein and an arched lid secured to one of the corners of the tube and provided with rounded edges adapted to enter the concave recesses in the corners for forming an air-tight closure.

No. 541,091.—Pneumatic Tire for Vehicle Wheels. John F. Ives, Cleveland, Ohio, assignor to the Mechanical Rubber Co., New York, N. Y.

The sheath for a pneumatic tire split along its inner side, the edges forming flaps which lap past each other, one flap being permanently secured to the wheel rim and abutting at its edge against an annular rib or enlargement on the other flap, the meeting point being arranged adjacent one edge of the wheel rim each flap provided with two parallel series of perforations, a cord laced diagonally through the two series of perforations of each flap forming diagonal loops, and a third cord laced through the loops of each flap.

No. 541,206.—Tire for Vehicle Wheels. Frank Sully and William E. Dowson, Nottingham, England.

In a tire for the wheels of bicycles and other vehicles, the combination of the centrally recessed rim, the rubber band or ring having grooves on each side, the series of open ended steel spring rings centrally engaged in the recess of the rim and having their ends engaged in the side grooves of the rubber band, the felt packing between the rim and the series of rings supported thereon, the nuts and bolts securing together the rim, rings and packing, and the covering laced on to the tire.

## MECHANICAL GOODS.

No. 541,506.—Hose Coupling. William Curlett, San Francisco, Cal.

A hose coupling comprising the coupling section having one end internally screw tapped, and its opposite end provided with a conical or tapering bearing to receive a hose section, and the band adapted to be attached to the coupling section and provided with a threaded bearing, a clamping screw arranged in the bearing and a clamp carried by the screw to confine the hose upon the tapering bearing of the coupling section.

No. 541,547.—Water Closet Connection. William H. Welsh, Savannah, Ga.

In a water closet connection the combination with a rubber gasket of a metal ferule having a recess at its inserted end adapted to receive the gasket, a projecting shoulder and a tapered portion between the shoulder and recess and smallest near the shoulder adapted to expand the gasket.

No. 541,716.—Hose Nozzle. Cornelius Callahan, Canton, Mass.

A hose nozzle embracing in its construction a duplex rotary shut-off plug consisting of an interior and an exterior member each provided with a full port or way and a restricted port or way, the interior member being constructed to have an independent limited movement within the exterior member, a single operating handle directly connected with the interior member to move both members, and friction means for retarding the movement of the exterior member.

No. 541,865.—Shut-Off Clamp for Hose. Erik M. Lundholm, St. Paul, Minn.

A shut off clamp for hose, consisting of two elongated plates or arms connected together at one end by springs, the springs connecting the plates and tending to throw them apart, one of the plates having secured upon its outer side a substantially tubular hose guide, and the other plate having a hose closing bail embracing the first plate near by the hose guide.

No. 542,029.—Stand for Lawn Sprinklers. Nicholas L. Rigby, Los Angeles, Cal.

The lawn fountain stand formed of strap iron and comprising two base members secured to each other at one end and arranged in V shape and each having its greatest width arranged horizontal to rest upon the ground, and each having its outer end curved upward and inward to form the two outer angles of the base and brought together flatwise midway between the two angles and secured by suitable means, such members extending upward from the point where they join and having their upper ends twisted to bring their greatest width in line with the two outer angles of the base; suitable means arranged upon the support to receive and hold a sprinkler or nozzle, and suitable means arranged at the apex of the V shaped base and adapted and arranged to receive and hold a hose.

## BOOTS AND SHOES.

No. 541,610.—Rubber Boot or Shoe. Charles L. Higgins, Montreal, Canada, assignor of two-thirds to Chester J. Pike, Medford, and E. Humphrey Paine, Cambridge, Mass.

A rubber boot or shoe having a rubber insole, a rubber upper and a waterproof vulcanizable intermediate fibrous section united to each other by vulcanization, the fibrous section having an exposed edge to act as a welt, a leather sole secured to the fibrous section by rubber cement and by stitches passing through it near its edge and the edge of the fibrous section, and an outsole and heel united to the intermediate leather sole by fastenings which extend through it into the sole but not through the insole.

No. 541,814.—Boot or Shoe. James D. W. King, Brooklyn, N. Y., assignor of one-half to B. L. Houghton, same place.

The improved elastic heel for boots and shoes consisting of a hollow impervious boxing shaped to the configuration of a proper heel, containing an impervious pneumatic receptacle or bag, a filling and retaining valve, an opening in the front wall of the heel, where it is protected against derangement, and a corrugated metal shield plate.

No. 542,175.—Boot or Shoe. James F. Sharpe, Toronto, Canada.

The process of securely attaching a rubber sole to boots or shoes which consists, in the case of a boot or shoe having a leather middle sole, in cementing to the upper edge of the rubber sole, when in a soft state, a strip of canvas or other material covered with a coating of soft rubber, the rubber side of the strip being next to the rubber sole, and vulcanizing the same; in then cementing the leather middle sole on to the rubber sole, and then turning the rubber coated strip of canvas up and over the leather middle sole, and cementing it down on the edge of the leather middle sole; the rubber sole and the leather middle sole thus secured together being then riveted to the insole and the upper.

## RUBBER MACHINERY.

No. 541,067.—Machine for Making Tubes. Cecil M. Clarke, Chicago, Ill., assignor to the H. W. Johns Manufacturing Co.

In a machine for making tubes, the combination with a frame, of a longitudinally traveling carriage moving upon said frame and having a rack, a mandrel carried by said carriage, mechanism for revolving said mandrel when held at its forward posi-



tion, moving said carriage back and forth, and automatically releasing the carriage when its rear limit is reached, and a vibrating carrier operated by the movement of the carriage.

No. 541,094.—Vulcanizing Apparatus. William R. Sine and Fred. H. Ward, Williamsport, Pa.

In an automatically operating vulcanizer, a receptacle provided with a steam-tight cap, the latter having a central opening or cylinder, in combination with a piston, adapted to work within the cylinder, its upper end extending above and without the cap, and a pressure ring, and adjusting ring, whereby the pressure of the hand screw is brought to bear upon the cap without interfering with the movement of the piston.

#### DRUGGISTS' SUNDRIES.

No. 541,630.—Bulb for Syringes. Henry D. Smith, Newark, assignor by mesne assignments to the Riverside Rubber Co., Belleville, N. J.

The combination, in a syringe, atomizer or the like, of a compression bulb and its discharge tubing, and an expansion bulb or pump connected with the tubing comprising therein two separable half sections, flexible and expansible and with a normal tendency to force themselves inwardly to exert pressure, the half sections having annular flanges adapted to be placed upon each other, and means for securing the half sections together.

No. 542,177.—Anal Bougie. Franklin P. Stukey, Lancaster, Ohio.

In a pessary, the combination with the inflatable sheath, of an extra inflatable sheath provided with perforations and adapted to be placed over the first named sheath to apply lubricants or medicaments.

#### INSULATION.

No. 541,921.—Manufacture of Electrical Conductors. Louis W. Downes, Providence, R. I.

The process of applying an insulating covering to an electric conductor, consisting in surrounding the core with a thin film of rubber, applying thereon a winding asbestos fibre, vulcanizing the rubber film, saturating the asbestos winding with silicate of soda or similar substance, applying a braided covering and coating the latter with incombustible cement.

#### MISCELLANEOUS.

No. 540,725.—Pneumatic Bicycle Saddle. Warren H. Craig, Lawrence, Mass.

A bicycle saddle comprising a main inflatable receptacle and an auxiliary inflatable receptacle within the main receptacle extending from one end to the other thereof and thereby forming two chambers in the main receptacle, one on each side of the auxiliary receptacle.

No. 540,975.—Finger Protector. Emma Grimes, Norfolk, England.

As a new and improved article of manufacture, a guard for the goods holding or guiding finger in hand sewing, composed of a tapered tubular body of soft rubber, having at one end an inwardly projecting annular flange or end portion guarding the edges of the finger-tip and provided in the end with an opening of sufficient size to expose a sensitive portion of the finger tip for use in manipulating the goods being handled, such end opening and the annular flange surrounding it being concentric with the tubular body, and the latter being similarly formed throughout its circumference whereby to avoid the necessity of specially arranging the guard upon the finger, the sides and end portion of the guard having their exterior surfaces smooth and free of projections or perforations to prevent catching the point of the needle, and soft and yielding to avoid any injury to the needle point, the guard being flexible and elastic to fit upon and not interfere with the flexing of the finger.

No. 541,015.—Pneumatic Collar Pad. Hermann Schroeder, Breese, Ill.

A pneumatic collar pad, constructed of a single piece of flexible material of inverted U shape, having apertures formed in the sides, inflatable sacks or cushions, formed integral with the under side of the piece of flexible material, a flexible tube con-

necting the inflatable sacks, and an air valve located in one of the inflatable sacks.

No. 541,901.—Embalming Instrument. Owen V. Thornton, St. Joseph, Mo.

In an embalming instrument an inflatable bulb provided with a flexible tube with valve through which the tube may be inflated with air to prevent the escape of air, gases or fluid through the esophagus, in combination with a flexible tube passing through the bulb and through which tube fluid may be injected into the body by the embalmer.

No. 542,112.—Means for Utilizing Air Cushions on Railway Cars. Linford F. Ruth, Connelisville, Pa.

A passenger car having an air reservoir with pipes leading therefrom and terminating in ground sockets with automatic check valves, air cushions provided with similar ground sockets and automatic check valves, and a detachable hose having at each end exteriorly ground nozzles with projections adapted to force open the check valves when the nozzles are inserted in the sockets.

### INDIA-RUBBER IN JAMAICA.

ONE result of the persistent efforts of those having in charge the royal botanic garden at Trinidad to inaugurate the India-rubber industry in Jamaica has been to establish the fact that a rubber-yielding plant likely to prove of value is indigenous to that island. It is the *Forsteronia floribunda* (Don.), known locally as the "milk withe." According to the *Bulletin of the Botanical Department* (Jamaica), this climber is found generally as thick as a man's wrist, and sometimes much thicker, and it reaches to the tops of the tallest trees, though often growing over rocks, fully exposed to the sun. The sap coagulates simply on exposure to a dry atmosphere, and a favorable report has been made upon specimens of the product sent to the Silvertown India-Rubber, Gutta-Percha, and Telegraph Works Co., Limited. This item is a reminder that about eighteen months ago THE INDIA RUBBER WORLD contained a notice of a rubber-vine in British Guiana, known to botanists as the *Forsteronia gracilis*, which evidently is closely related to the Jamaica climber. In the opinion of the government botanist at Georgetown other rubber-producing plants exist in his country, and it is not unlikely that others are yet to be discovered in other American states.

Some Pará rubber-trees have been grown in the Jamaica gardens, but they are not yet old enough to be tapped. There are a number of Assam rubber trees (*Ficus elastica*) in various parts of Jamaica, some of which are reported to be from fifty to sixty feet high and twelve to fifteen feet in circumference. As much as two pounds of rubber has been obtained from one of these trees in a season. There are also Ceará and Central American (*Castilloa elastica*) rubber-trees under cultivation in Jamaica.

A letter to the governor of Jamaica by a Mr. Pierre Jay has been published, asserting that the Central American rubber-tree is so far different from those of Pará that "its milk is not susceptible of being cured by smoke. It may be congealed, however, with infinitely less expenditure of time and labor, by the juice of a vine common in tropical forests, or by soap." He feels "sure that it will congeal without the addition of any chemical whatever."

ALTHOUGH the rubber-tree of Assam (*Ficus elastica*) is one of the largest in the forest, its seeds are so small that a pound of them sent to British West Africa by post numbered 270,000. These tiny seed germinate readily and it is hoped that this variety of rubber will succeed in Africa.



## THE CAUSE OF POROUS RUBBER TIRES.

*By a Rubber-Manufacturer.\**

THERE is no one part of a bicycle so important as the tire, and no one part so little understood by the rider, and, in fact, by most of the bicycle-manufacturers who use them.

Most people imagine that the making of a pneumatic tire is a very simple operation. They liken it to a garden-hose and fancy it a mere trifle, but there is nothing more difficult nor anything in the rubber-goods line that requires more care in manufacture than a single-tube tire. We make both single and double tubes, and have sold far more of the former than of the latter. We give our patrons exactly what they call for, and are not prejudiced in one way or the other. I simply know that the volume of single-tube tires that are returned to not only ourselves, but, to my certain knowledge, to every other manufacturer, is amazing. No, the making of a double-tube tire is not so difficult. You can see what you are doing. With the single tube it is different.

The cause of the trouble? The inability to locate the source of a puncture or leak. We can, of course, make a tire that is fairly safe, but from the very nature of things it must be heavy and dead. You may take it for granted that in every case a lively, resilient tire is easily—too easily—punctured. It cannot be otherwise. Riders must choose between the two. One reason why a puncture in the single tube is so hard to locate—impossible, in many instances—is that the puncture has gone not only through the thread of the tire, but has minutely pierced or pricked the inside of the part next the rim. Few riders realize this. In fact, from the number of tires returned it seems as if none of them do. But, perhaps, they are not to blame. When such a puncture occurs every rider and every agent immediately apparently concludes that the tire is "porous." They have all caught on to that term. The tires are shipped back to the makers, and it cannot be denied that they, too, are often nonplussed. The puncture not having gone clear through, but merely pricked the inner coating, when the tire is placed in water a splendid aquatic display ensues. The air oozes through and in and around the threads of the fabric, and usually finds a dozen or more outlets, not one of which may be near the true source of the trouble, which is, of course, inside and invisible. Frequently it causes little pimples or blisters, and though one may insert plugs wherever one appears or wherever the water bubbles, it does no good. The tire still leaks. We have often inserted twenty plugs in a single tire and then had to give up the chase, for it really amounts to that.

What causes a porous tire? Oh! there are any number of causes. We once had a spell of that sort of trouble with our inner tubes, and were at our wits' end to find the reason. We finally located it. Workmen walking on the floor above shook from the ceiling into the rubber composition fine particles of dust and wood. Another time we found that in the absence of the foreman some of the men had been skylarking—throwing at each other rags or something of the sort, which had been lying on the floor, and which contained fine particles. These got into the rubber, and a big batch of porous tires resulted. A mere speck on the mandrel or pole on which the tires are formed will also cause expensive mischief of the same sort. I understand that one of the biggest single-tube manufacturers in this country had more than \$30,000 worth of porous tires re-

turned to him before he located the trouble—a minute speck or inequality on the mandrel. Yes, I know it sounds large, but I believe it. I know it is possible. It will give you an idea of what I told you at the outset—of the great care necessary in our business.

There may be a remedy, or a partial remedy. I think I've found one, but it means a heavier tire, and, as I said before, riders will have to choose between a lively, easily punctured tire, difficult or impossible to repair when punctured, as I have stated, and one that is not so easily punctured, but which is heavier and lacking in resiliency. There seems no other way out of it, although I do not believe that any one has yet found exactly the proper fabric. I look for something new in that line.

[As a matter of fact the problem of avoiding porosity is one that has caused the rubber trade a deal of trouble and cost much money. There are times of course when particles of dust dropping upon sheets of thin rubber will cause porosity, but as a rule this is far from being the cause. A more common one is the presence of gas developed in the compound during vulcanization. For example, if the fabric upon which the compound is to be spread, or if the compounds themselves are damp, when heat is applied that dampness will become steam, and will form little bubbles in the rubber thereby causing porous places. Further than this certain of the poorer grades of rubber contain ingredients that under heat resolve themselves into gases that do exactly the same thing. Then too, in compounding it oftentimes happens that two or more ingredients that are brought together will form a gas that results in the worst sort of porosity. For these reasons rubber, adulterants, and fabrics should all be very carefully dried. After the compound has been spread on the calender, it is also an excellent plan to let it lie on the rack from twelve to twenty-four hours before using, which will oftentimes entirely do away with a tendency toward porosity. Rubber manufacturers who employ chemists can very easily tell whether their compounds are such that will develop gases during vulcanization, and should be able to avoid porous goods. A very good common cure for compounds that have a tendency to blister is to add a little slaked lime, which has long been known as preventive for this sort of trouble.—THE EDITOR.]

## RUBBER-TREES FOR SHADING COFFEE.

IT is the opinion of a writer in the *Ceylon Observer* (Colombo) that some of the planters of that island have been too hasty in getting rid of their Liberian coffee-trees to make room for tea. He has been experimenting with Liberian coffee shaded by India-rubber trees planted wide apart, with such results that he has determined to increase his acreage. To bare the ground to the tropical sun and the pouring rain, he says, is most injurious to Liberian coffee. If, on the other hand, the shade is too heavy, the coffee-trees grow up spindling and without vigor. India-rubber trees not only furnish a desirable shade, but they may be expected, in time, to become a source of profit. But the coffee alone he regards as a more profitable crop than tea. It is interesting to thus find paralleled in the far east the results obtained in Mexico from planting coffee and India-rubber together, as reported to THE INDIA RUBBER WORLD some time ago by Mr. F. O. Harriman.

\* Reprinted from *The Wheel* (New York), June 18.

## PARISIAN NOVELTIES IN RUBBER CLOAKS.\*

THE styles of rubber cloaks follow those of cloaks in general, unless the material necessitates deviations. But there are quite a number of styles which exist in rubber and Silésienne only, and in these the peculiarity of the material has been duly considered. The cloaks of Silésienne or Sicilienne, on account of the elegant manner in which our manufacturers have made them, have been given the preference for dusters and traveling coats, while the real rubber cloak is in especial demand for extended tours in wind and weather, in which it performs excellent service.

The cloak made from Silésienne is considered elegant, while the real rubber cloak is deemed more practical, and surely the latter loses nothing by that classification, as there are at least as many employed traveling people, who have to give the preference to the practical instead to the elegant, as there are aristocratic idlers. This special distinction is held secure to the rubber garment by the intentionally plain style in which it is made. Even if several styles are introduced to suit the tastes of a few, the public generally chooses those least pretentious in cut and trimming, while for the Silésiennes more ornamentation is desired.

One of the nicest and most comfortable styles is the large, wide, sleeveless Rotunda, which can simply be thrown around one. It is either simply ruffled around the neck or drawn in minute irregular puffs—alternating raised rosettes and small flat rows. The latter style precludes all further trimming, so as not to conceal the delicate and pretty workmanship; on the contrary, ribbon in several rows or a small pearl braid are much favored. Further, the Rotunda can be attached to a nearly round, less pointed, *empiècement*, which forms a wide encircling hood. This hood, which gives the "chic" appearance to the cloak, must be especially considered, as to cut and finish, because it is an item of great importance. Besides this round hood we have the one coming to a point at the back, very large and wide ones, and one coming to a point in front, and others. The wide facing is one of the main points. For the hood of the more stylish garments a folded lining of wide contrast is selected, of either silk of bright color or fancy checks, the facing widening considerably towards the back, which is considered elegant. This contrasting lining for the hood is also used in real rubber garments, but instead of silk a rubber stuff is used. Velvet is sometimes used for facing the former ones, and generally in the same or darker shades than the garment itself; in this case, the high turn down collar is also faced with velvet, but in such a way as to leave quite a strip of the material exposed.

All the garments are finished with a very wide hem at the bottom, and we may almost say, the more stylish the garment the wider the hem. It seems as if the quantity of the stuff was to be the imposing feature this year. The three or four lengths of the cloaks are taken from the whole width of the stuff, and are little or not at all slanted towards the top; the hood rests loosely on the shoulders and reaches, at the back, frequently to the waist, while in front the two ends do not meet,—which of course would look objectionable,—but are kept apart. Instead of being ruffled the Rotunda is worn in all-around plaits, with a wide double crushed plait from front to back. Others prefer plaits which are very sharp on top, closely pressed together, and flaring at the bottom; this style is worn by both young and old. Those who do not fancy the hood have a remedy in a

shoulder garnish running obliquely, consisting of a wide strip, ruffled and crested with small tufts. Although this style of trim may seem rather plain, it nevertheless has the desired effect which is that the shoulders should appear as broad as possible, especially so when the stuff has a wide stripe, forming a sort of collar, or is lengthened by lace. Sometimes several rows of doubled-up stuff are laid around the ruffled *empiècement*, which produces a very tasteful shoulder cape.

The style favored next to the loose mantle form, which is held at the neck by a few hooks and a chiseled antique silver clasp, is the pattern drawn in at the waist, and long flowing in front. It is worn especially by elderly ladies, while the younger ones with one accord declare for the former one, calling it "chic," in which they are right, although it may not be quite so practical, as in that case the two openings at the sides, forming the sleeves, are missing. Of the last kind, with the openings, I have before me a sample in mordoré Silésienne, with pointed, pearl trimmed *empiècement*, joined by crazy puffs to the garment. The whole width of the front is inserted in light-colored stuff, which produces a very original effect. The back is finished in plaits, wider at the top and smaller at the waist, where they are fastened; a small belt with two pearl buttons seems to hold it together. Another garment of bi-colored rubber was trimmed over the shoulders with a long, smooth pelerine, and appeared very dressy. The pelerine did not close altogether in front, and was fastened by several short stepped-up folds of its own material, ornamented with pearl buttons.

The close fitting styles, including the favored form *Redingote*, have not disappeared from the arena, but stand back a little of the loose, wide, sleeveless Rotunda, because it is almost impossible to force the quantity of material used in the modern sleeve into one for a rubber garment, unless a gigantic sleeve is intended, as the lining of stiff muslin and hair cloth are bound to enlarge the puff and the cloak itself suffers in width; it is for that reason that most of the garments are sleeveless.

Inasmuch as the possessors of graceful waists are prone to lose no opportunity to exhibit the same, a resource has been found in the manufacture, for the summer, of a very tight-fitting rubber cloak, but sleeveless, with slits instead of sleeves. A properly-made over pelerine will hide this defect effectually; these are with Silésienne cloaks richly ornamented. Some of them consist of stuff and lace-volants, alternating; others are profusely plaited but always umbrella-shaped, in order to have them smooth around the throat opening, and are trimmed in various ways with *passementerie* border and lace.

Whenever a cloak is made with sleeves they are always very long and fall partly over the hand, to make it (the hand) appear smaller. Of course the puff at the top of the sleeve is as gigantic as it is possible to make it; in a very handsome rubber cloak the same was drawn up in a point to the shoulder and fastened with a small button, while the remaining part of the puff was crinkled onto the cloak with prominent appearing buttons, all around.

A FRENCHMAN has recently introduced a new form of India-rubber cork. The rubber is hollow, and at one end a hard disc is attached, through a perforation in which a rod passes to the bottom of the cork. On pressing the rod the stopper elongates, and can be introduced into the neck of the bottle; on releasing the pressure the stopper contracts in length, but increases in diameter, and will be firmly held by the neck, which of course should be slightly smaller than the cork.—*Apotheker Zeitung*.

\* Translated from the *Gummi-Zeitung* (Dresden), June 1.

## NEW GOODS AND SPECIALTIES.

OF all the popular novelties that the "rubber wizard" of Boston has produced, none have sold so rapidly in an equal time as this glove cleaner. It is simply a rubber brush with, however, peculiar cup-shaped teeth that cleanse soiled kid gloves more effectively than any other means. The gloves are cleaned by rubbing the dirt off and not in. The brush needs no moisture, no soap—in fact, no preparation at all. It is, however, wise to wash the brush first in soft water, with a little soap, and then dry it thoroughly. Although the goods have only just been shown to the trade orders for over a hundred gross have been booked. Manufactured by C. J. Bailey & Co., Boylston street, Boston, Mass.



## A NEW AMERICAN RUBBER.

THE American Rubber Co. are always on the *qui vive* for something new. A very pretty rubber with a new design,



shown in the accompanying illustrations proves this. This shoe has a capped toe which gives it a very dressy effect, making it look in fact very much like a patent leather shoe. At the same time it greatly increases the service of the rubber, as the toe is the most exposed part of the shoe, and this double thick-



ness gives protection where it is most needed. The shoe is made in three different styles,—in the "Princess" for women, in the "Sensible,"—a high vamp rubber for stormy days, and in the "Byron" for men; and are packed in cartons. Manufactured by the American Rubber Co., Boston, Mass.

## MINIATURE OR TOY BOOTS AND SHOES.

It is surprising how many people covet these little articles and how largely they are sold. Of course they are of no earthly use except as ornaments, or it may be that they are sometimes put upon the feet of very small dolls. It is a matter of record however, that where they have been exposed for sale at fairs that they have been among the most popular sellers of any of the novelties there. Old and young have willingly paid 25 cents a piece for souvenirs of this kind. The illustrations show exactly what they are. Manufactured by the Wales Goodyear Shoe Co., 128 Bedford street, Boston, who sell the boots for 20 cents a pair in postage stamps and the shoes for 25 cents a pair in the same handy currency.



## B. T. H. VAPORIZER.

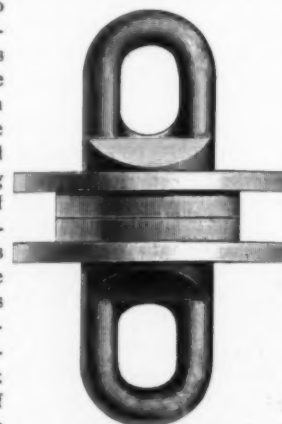
THIS instrument is one of the most useful and practical for the purposes intended of any of the vaporizers in the market. It is used for the direct application of remedies to the respiratory organs and has the following advantages: It is made entirely of hard rubber and consequently can be used with perfect safety with any medicine; it throws a vapor with a force suffi-



cient to enable the patient to inhale the whole volume of the remedy required (thereby obviating the unpleasantness of having part of the medicine stick to the palate) and it can be used in cases where it is impossible to use the ordinary atomizer, as it supplies vapor instead of spray and is therefore especially recommended for the application of medicinal preparations to the eyes and ears. It is so compact that it can be carried about easily. Manufactured by Ellis & Goltermann, New York and London.

## THE I. X. L. RUBBER BUCKET.

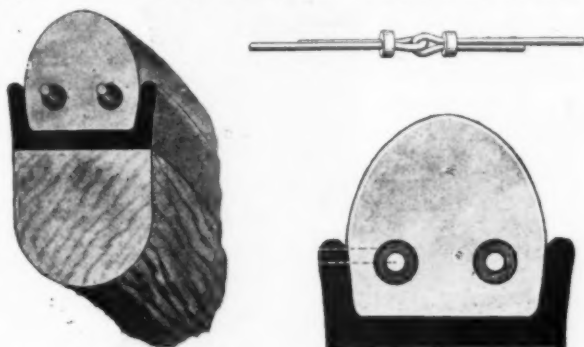
THE illustration shows what is said to be the only bucket that cannot be put into the pump upside down. This special feature is of genuine advantage as many buckets are ruined the first time they are used from this very cause. This is made of a good quality of rubber, and as will be seen is double, having two wearing edges instead of one, with a corresponding increase of suction power. It has a water space that allows the use of water packing which is as good as rubber without any increase of friction. It is both reversible and self-adjustable. It is so pliable that it adjusts itself to any size of tubing, a reverse motion of the crank will not injure it, and the rubber cannot be stripped from the link. Manufactured by O. P. Schriver & Co., Cincinnati, Ohio.





## THE VICTOR RUBBER TIRE.

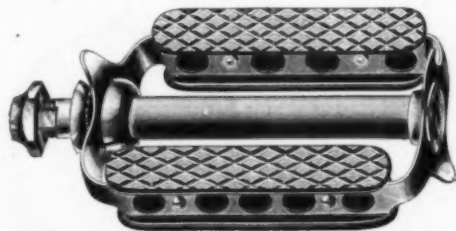
THE experimental stage for rubber tires on road vehicles has been safely passed and the popularity of the rubber tire is to-day assured. The Victor tire which is a new departure in this line, claims to have overcome what existing objections there are to those now in use. First, they use a patent fastener which makes the joint absolutely secure, and second, the wires being encased in leather there is no chance for them to cut through the rubber, and they further afford perfect resistance. This leather casing is claimed to be a necessity because in putting the tire on a steel channel it is essential that the wires be drawn very tight, in order to keep the tire from rolling out, and this con-



stant pressure, which is greater than is generally supposed, naturally causes the wire to cut through the rubber in the course of time and the strong tension causes the joints to break. Further than this, the patentees claim that they have new and improved devices upon which patents are now pending, for putting on a rubber tire with a greater degree of accuracy and permanency than heretofore attained. The manufacturers have been very careful in getting a quality of rubber that is unsurpassed for elasticity and wearing qualities. The Victor tire can be fitted to old wheels as well as to new. Manufactured by the Victor Rubber Tire Co., Springfield, Ohio.

## THE IDEAL RUBBER PEDAL.

A PEDAL that is much stronger than the old style rubber pedal and at the time almost as light as the rat trap is that shown in the accompanying illustration. In this style the ladies' pedals weigh but fourteen ounces to the pair while the gentlemen's weigh but sixteen ounces. The chief objection to rubber pedals heretofore has been that they were too heavy for



the ordinary rider and therefore the rat trap has been very popular. There have been, however, many objections to the latter style, and now that a light, strong and durable rubber pedal is on the market there is no doubt that there will be a great increase in the demand for it. The illustration shows very plainly the style of the pedal, the corrugations being deep, and the rubber of good quality so that it is a long time before it even approaches smoothness through wear. These pedals

are listed at \$5 per pair for all styles, and a great many thousand pairs have already been sold. Manufactured by Parkhurst & Wilkinson, 148 Kinzie street, Chicago, Ill.

## PNEUMATIC WADING PANTS.

THE INDIA RUBBER WORLD has already illustrated and described the Lyman Pneumatic Boat which has had a re-



markably good sale. An adaptation of this is shown in the illustration, where the boat is really combined with a pair of mackintosh wading pants. This is really the ordinary mackintosh wader to which are added the air chambers, and the combination proves itself well adapted for hunting and fishing in



many localities. When the air chambers are not inflated that portion lies perfectly flat around the body being supported by straps over the shoulder, and in this condition may be used like

the ordinary mackintosh waders. When the chambers are inflated the sportsman can go into deep water or cross streams heretofore impassable without a boat. The position is perfectly upright in deep water, and the user may propel himself by using the detachable paddles which are shown in the smaller illustration. These paddles act on the same principle as the paddles on the Layman pneumatic boats. They can be quickly attached, occupy but a small space when not in use and do not interfere with walking or wading if occasion requires it. Manufactured by Layman Pneumatic Boat Co., New York.



#### A CUSHIONED HAND STAMP.

A NEW rubber stamp cushion for hand stamps is shown in the accompanying illustration. It is a perforated cushion which admits of a perfect impression over an uneven surface, and, perhaps, best of all, shows a clear and uniform impression upon an even surface, although the handle of the stamp may not be held perpendicularly. The rubber cushion is durable and comparatively inexpensive, and its strongest point is that it obviates very careful and expert handling of rubber hand stamps. Manufactured by J. P. Cooke & Co., Omaha, Neb.



#### DELPHY'S NON-CONDUCTING SPECULUM.

THIS speculum is made of hard rubber, and will retain its shape no matter how hot the water is in which it may be placed. The blade is similar to a Sims, but without the duck-bill tip. The handle is simply a prolongation or continuation of the bottom and sides of the blade, and is joined to it at an angle of about seventy-five degrees, the handle forming a trough for conducting the solution and débris to a receptacle



beneath. The edges of the trough-handle are slightly cut away, about half-way down, to afford a better grasp in holding. At the bottom are two notches and a hole to which the bail of a pail can be either hung directly or fastened by means of a hook, thus making the instrument self-retaining in certain cases.

The instrument is intended for use in post-partum and post-abortion intra-uterine douching and in curetting, and the ad-

vantages claimed are: It is simple, light, and cheap. It is a non-conductor of heat, and therefore protects the sensitive perineum. It does not corrode. It can be easily cleaned and rendered aseptic, either by chemicals or boiling. It can be held by an assistant; or, it can be made self-sustaining in certain cases. The débris can be seen as it escapes through the trough-handle to the receptacle beneath. Manufactured by Geo. Tiemann & Co., New York.

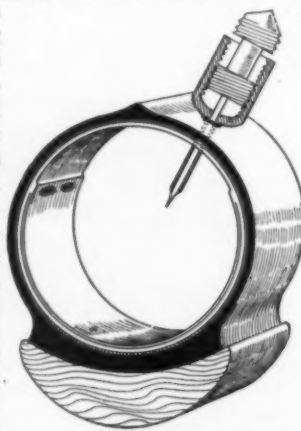
#### A FINE FIREMAN'S BOOT.

HERE is shown a fireman's rubber boot, which is different from others, as it is made with diagonal ribs running across the leg. These ribs serve to strengthen it, while they do not increase its weight materially. By the addition of these diagonal ribs, the leg is rendered very stiff and firm, so that cracking is practically impossible. The sole is also a very firm and serviceable piece of work. It has a rolled edge, which runs back to the heel, —an admirable device, inasmuch as it greatly assists the fireman in climbing ladders, making slipping impossible. In short, this boot is built exclusively for firemen's use and for the hardest kind of wear. Manufactured by the Meyer Rubber Co., 90 Reade street, New York.



#### A NEW TIRE REPAIRER.

A VERY compact and practical tool is the tire repairer shown in the accompanying illustration. It consists of a cement nozzle and needle plug, the needle plug screwing into the cement nozzle and forcing into the puncture the proper amount of quick drying cement. The illustration shows exactly how it is used, that is, the needle is for enlarging the hole and when in use with the cement nozzle acts as a rotary piston forcing the cement to the inner side of the tube. In case of puncture the tire is first inflated to riding pressure and the point of the cement cup is inserted into the puncture. The needle plug is then inserted and the cement cup nozzle filled with cement; the needle plug is then put in again and the tire turned over so that the cement is forced upward. This is done by screwing the needle plug round and round. The cement will then flow over the puncture and when the instrument is removed will cover it up entirely. The instrument having been removed the tire is deflated and pressed together over the point where the cement is in order to spread it evenly, the wheel being held at





its highest point where the puncture is. The tire is then half inflated and allowed to stand about two minutes when the cement will be dry, then the punctured spot is pressed upon once more and the tire wholly inflated. As will be seen in the last illustration there is within the inner tube a continuous patching band which is pressed against the place where the cement came through and formed a patch on the inner side, without the necessity of removing the tire from the rim. The whole apparatus is very simple when one understands it, and looks to be an exceedingly practical affair. Manufactured by Morgan & Wright, Lake street, Chicago.

#### NEW TRADE PUBLICATIONS.

THE issue of a new 94 page catalogue by the Boston Woven Hose and Rubber Co. is a fitting method of calling attention to the completion of a commodious new factory, which doubles their already extensive plant. They note also the advantage which they possess from having much new and improved machinery, mostly of their own invention. There is a very full list of belting, hose, packing, valves, and mats in this book, together with such specialties as rubber stopples, weather-strips, fruit-jar rings, printer's blankets, bath mittens, rubber brushes, deckle straps, etc., besides which the company invite orders for every kind of mold-work. In addition to this pamphlet special catalogues are issued in relation to each leading line of manufacture, including bicycle tires, which are not here referred to at all.

THIS year is the fifteenth anniversary of the Goodyear's Metallic Rubber Shoe Co. [Wales-Goodyear] and a glance at their new "pocket catalogue" of rubber boots and shoes suggests that the company have not lost any enterprise or energy with age. In addition to covering all the staple lines, they announce an extensive list of "specialties," showing an adaptation to the latest tendencies of fashion. These goods make an especially fine appearance in the cuts, and it is claimed that "the Wales Goodyear Co. have increased the sale of their goods to the fine retail trade in the past three years more than any other company."

THE Commonwealth Rubber Co.'s (New York) catalogue issues from their new retail department, No. 2 Astor House, where their offices have been located since May 1. Their old address, No. 54 Vesey street, is retained for the wholesale trade. A full list is given of standard mechanical rubber goods, followed by "Niagara" bicycles, mackintoshes for men and women and Cravenette waterproof clothing.

LIFE is not without its drawbacks, even among the easy-going *seringueiros* of the Amazon valley. A correspondent at the mouth of that great river writes: "From the Rio Negro comes news of a frightful hurricane. Islands have been overflowed, the huts of rubber-gatherers destroyed, and canoes (some of which contained rubber of value) completely lost." But a fate worse than hurricanes may befall rubber-gatherers on the Madeira and Beni rivers. A little book lately issued by R. F. Sears & Co. (Pará) devotes a chapter to the savage Caripuna Indians of Bolivia, who are declared to be cannibals, beyond doubt. They have often attacked the rubber-gathering Indians.

THE rubber-stamp business is about the most widespread branch of rubber-manufacture. There are few important commercial centers, on any continent, where the making of rubber stamps is not carried on. Recently-published directories of cities in India record twelve concerns supplying stamps in

Calcutta, four in Bombay, and four in Madras. A directory of Cape Town, South Africa, mentions a rubber-stamp manufacturer, while five are listed in Rio de Janeiro. The business is particularly good in Australia, the directories showing rubber-stamp concerns as follows: Melbourne, four; Sydney, eleven; Brisbane, six; and Auckland, four.

THE advice to "Make your own weather" has a connection with garden-hose and lawn-sprinklers which is made plain in a circular sent out by The B. F. Goodrich Co. (Akron, Ohio). There is given a full list of the brands of hose made by them.

FROM Rome comes a series of price-list cards of India-rubber goods kept in stock by Sorelle Adamoli (the Adamoli sisters), at Nos. 103-106 and 117 via Plebiscita. They have also a branch-house at Palermo, at No. 162 Corso Vittoria Emanuel. Among the articles listed are various classes of rubber hose, rubber baths, waterproof clothing (including dress-shields), rubber horse shoe pads from London, footballs, lawn tennis, tamburello (a game peculiar to the country, played with a ball), shoes, rubber toys, and bicycle accessories. Of the latter, the first article on the list is the Dunlop tire, extra strong, at 26 lire [= \$5.20] each, or \$10.40 per pair. The "common" Dunlop tires are listed at 21 lire. A higher-priced tire is the "Continental," from Germany, which is retailed at 33 lire [= \$6.60] each. Other types of tires are the "Italiano" and "Milano," manufactured in Italy.

TYPKE & KING (London) supply for the use of their customers a pamphlet of instructions regarding their specialties for India-rubber manufacture. They offer a variety of pigments and compounds, together with a rubber-substitute for mixing with India-rubber for proofing cloth, in the manufacture of mechanical goods, etc. To guide manufacturers in the use of these goods some formulæ are given, though it is suggested that it may often be necessary to vary the proportions given to meet the requirements of particular cases. The firm named have established an American agency, the address for which may be learned from the advertising pages of this journal.

THE illustrated catalogue of the Meyer Rubber Co. for 1895-96 is one of the most complete publications in the rubber-shoe trade. First there are forty-seven pages of descriptions of the staple goods and specialties which fifty-three years of experience have suggested to the firm as best suited to their market. Then come the list prices of their goods, followed by tables of net prices. The catalogue concludes with a useful list or scale of packing, showing what proportions of the different sizes of shoes are contained in each case of goods.

FROM the Jersey Co. [United States Rubber Co.] comes a catalogue of boots and shoes for the season of 1895-96 in which attention is called to the fact that the illustrations are all from photographs, affording thus a perfect representation of the goods described. This company has aimed at making the most stylish and the most serviceable rubbers, and, as a means to the latter end, all "Jersey" shoes are made in two weights—medium and heavy—adapted both for city and country trade.

A HALF-DOZEN different atomizers, for as many different uses, are illustrated in a circular from the Tyer Rubber Co. (Andover, Mass.), though it is mentioned that this does not comprise their whole list. An illustration of one of their fancy atomizers, in a line selling at from \$4.50 to \$18 per dozen, is especially attractive.

## UNITED STATES RUBBER COMPANY.

THE attention of outsiders was directed lately to the affairs of the United States Rubber Co. to an unusual degree by a public reminder from the New York Stock Exchange that their annual report had not been formally presented to that body. The wide publication of the report in the newspapers was not a compliance with Stock Exchange rules, whereupon Colonel Samuel P. Colt, legal adviser of the rubber company, appeared before the proper committee of the Exchange, formally presented the report, explained its details, and was informed that the statements were satisfactory. For the reason that the report read by Colonel Colt was somewhat more in detail than the statement by Treasurer Flint already printed in this paper, it is given below, the figures relating to the business year of the corporation, ending April 1, 1895. It will be remembered that the United States Rubber Co. own only two plants—those of the New Jersey Rubber Shoe Co. and the Lawrence Felting Co.—while the other affiliated factories are controlled through the ownership of all or a majority of the capital stock of the original corporations. In the balance sheet which follows, the figures refer to the business of the plants owned by the company, the remaining interests of the company being comprised within the item of "Investments":

BALANCE-SHEET.	
Assets.	Liabilities.
Cash... \$119,900.99	Preferred stock. \$19,400,500.00
Bills receivable..... 92,199.50	Common stock. 20,166,000.00
Accounts receivable:	Accounts p'ble. 110,144.75
For merchandise..... 759,023.88	Bills payable... None
For miscellaneous... 122,907.24	
Raw material on hand... 303,701.47	
Manufactured goods on hand..... 478,020.76	
Additions to plant.... 70,168.88	
Furniture and fixtures... 20,208.25	
Investments [in the stocks of other companies] .. 38,586,731.66	Surplus..... 876,217.88
Total..... \$40,552,862.63	Total..... \$40,552,862.63

## OPERATIONS OF THE YEAR.

Income.	
Profits from the operation of plants owned by the company... \$178,767.52	
Dividends from stock owned in other corporations..... \$2,751,476.00	\$2,930,243.52
Disbursements.	
Salaries, rent, taxes, legal and other expenses..... \$213,873.50	
Dividends on preferred stock [4% each in July, 1894, and July, 1895]..... 1,552,040.00	
Dividend on common stock [2½% in March, 1895]..... 504,150.00	2,270,063.50
Balance to Surplus..... \$660,180.02	
Surplus.	
At the beginning of the year, April 1, 1894..... 216,037.86	
Total Surplus, April 1, 1895..... \$876,217.88	

"The net earnings of the several companies from which the above income was derived was \$3,038,351.35." This is the conclusion of the report read by Colonel Colt. These figures represent \$286,875.35 in excess of the amount of dividends earned by the United States Rubber Co. from its "Investments." It does not follow that this amount has been distributed to other shareholders in the constituent companies; it is more probable that the money has been retained among them in the form of surplus funds, or even of manufactured goods in stock. The

statement was published last year that the United States Rubber Co., as a corporation, owned the entire capital stock of the different concerns "with the exception of 10 shares outstanding of one company and a majority interest in the Goodyear's India Rubber Glove Manufacturing Co."

It will be seen from the above statement that the capital account of the United States Rubber Co. exceeds the amount of its "Investments" by \$979,768.34, which may be taken as the capitalization of the plants owned by the corporation.

In connection with the action of the directors of the United States Rubber Co. in passing the last half-yearly dividend on the common stock, the following law has been quoted as affecting the corporation: "When such accumulated profit shall consist in part or some proportion in merchandise necessarily employed in the business of such corporation the same shall not be regarded as profit for the purpose of such dividend."

\* \* \*

The trading in Rubber stocks during the past month was marked by no feature of importance, the daily transactions being small in volume, and prices remaining practically on a level. The quotations since the beginning of the year have been as follows:

## LISTED ON THE NEW YORK STOCK EXCHANGE.

201,660 shares Common = \$20,166,000  
194,005 shares Preferred = \$19,400,500

DATES.	COMMON.			PREFERRED.		
	Sales.	High.	Low.	Sales.	High.	Low.
January, 1895...	13,296	45	39¾	2,152	94½	91
February.....	9,075	44	39¾	1,784	94½	92½
March.....	10,667	41½	37¾	4,984	94¾	93¾
April.....	22,595	41½	39	8,416	94½	93
May.....	78,411	47¾	40	11,758	97	93¾
June.....	111,158	48	37¾	8,257	98	91¾
July.....	31,482	42½	39	3,189	94¾	93

There have been rumors in plenty of late that the common stock is likely to advance materially before the end of summer.

## ART IN ADVERTISING.

A FEW years ago the advertiser thought it was quite sufficient if he set forth what he had to sell in as large and black type as possible and let it stop there. But the shrewd advertiser of to-day not only tries to tell his story, but wants to do it attractively so he calls art to his assistance. There are three excellent examples in this issue of artistic advertising.

First, there is the advertisement of the National India Rubber Company on the front cover that strikes the attention immediately. It is artistic and timely. Everybody likes an interesting picture, and everybody at present is interested in the bicycle girl; and seeing the picture, one inevitably reads the story. There is also the advertisement of the Candee Rubber Co. that is not only artistic, but attracts additional attention from the fact that it follows, to a certain extent, the prevailing fad in art,—the Beardsley style now so much in vogue. Then there is a third example of artistic advertising in the page which the Woonsocket Rubber Co. occupies. This is not only a very pretty piece of drawing, but just at this moment when everybody is more or less wrought up over the international yacht races, it is very timely, and is therefore bound to attract attention. Art in advertising pays. No advertisement can be too artistic.

## THE DAVIDSON RUBBER COMPANY AND ITS FOUNDER.

THE Davidson Rubber Co. owes its name to Dr. Herman E. Davidson, who, although he was the inventor of the Davidson syringe, would never accept any pecuniary benefit from it, as he held it unbecoming a physician and against the principles of the medical profession to enter into the manufacture and sale of any patented article used in the practice of medicine. After the use of the syringe in his own practice to a limited extent, he in conjunction with his brother, Charles H. Davidson, a man of special mechanical skill, perfected the instrument, and a patent being allowed, the brother, Charles, commenced its manufacture, under which patent the present company produced the goods, purchasing from Charles H. Davidson all his rights and title to the same a short time before his death.

Herman E. Davidson was born in Pelham, N. H., Aug. 10, 1815, and was of Scotch descent, his ancestors belonging to the clan of that name. His grand father was a soldier of the Revolution, enlisting on the first call in New Hampshire after the battles of Concord and Lexington. He was severely wounded at the battle of Bunker Hill and was carried from the field by his comrades, who found him insensible, but after a long illness he finally recovered and lived many years. At the age of twelve Herman entered the academy at Derry and two years afterwards went to the academy at Exeter, N. H., where he fitted for Harvard College, entering in 1832 and graduating in 1836.

In the meantime his father had moved to Charlestown, Mass., and it was here he commenced the study of medicine in the office of Dr. Walker, brother of President Walker of Harvard College, at the same time attending the lectures at the Harvard Medical School, taking his degree in 1840.

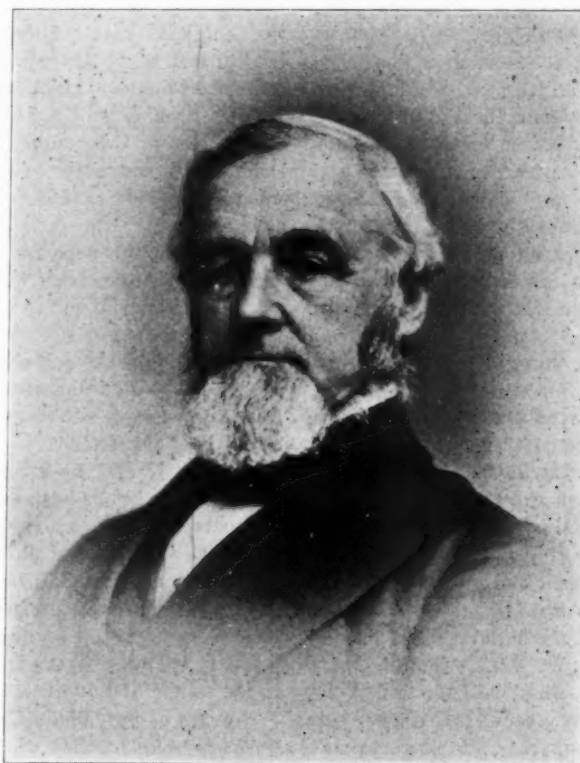
Close application to his studies had somewhat impaired his health and he therefore took a voyage to Africa, when after his return he settled in Apalachicola, Florida, and commenced the practice of medicine, but in about eighteen months he returned to Charlestown. After a few months he settled in Gloucester, Mass., then a small fishing town

about thirty miles from Boston, and continued there during the rest of his professional life, some thirty-five years, building up a large and lucrative practice and becoming a very useful member of the community.

While a resident of Gloucester he was chosen the first President of the Cape Ann Scientific Society, a member of the school committee, Vice-President of the Cape Ann Horticultural Society, and filled other positions of honor and trust.

To practice medicine in those early days with success made it imperative for the physician to understand all

branches of the medical profession, and Dr. Davidson was preëminently fitted both by education, skill and natural abilities to occupy a prominent position. In his office stood a large cabinet filled with the various drugs, chemicals and utensils with which he was able to compound and prepare any desired remedy, besides a complete outfit of surgical, dental and medical instruments, for it made no difference whether he was called to a case of surgery, dentistry or ordinary sickness, he was always equal to the emergency. Sometimes he was obliged to improvise appliances to meet the requirements of special cases, for if it were possible for him to obtain what he might want by sending to Boston or elsewhere, it took so long a time that the exigencies for prompt action would not admit of such delay. Then again it was



DR. HERMAN E. DAVIDSON.

as natural for him to consider how any known method or device could be improved as it was for him to think, and being a great reader, he always kept in touch with the improvements and discoveries relating to his own profession, as well as the general arts and sciences.

Thus the bulb syringe was invented by him to meet certain exigencies in his practice, as an improvement over the ordinary barrel syringe then universally used, for before that time a bulb syringe had never been made, although the number used at the present time far exceeds any other style. At another time he invented an improvement on a beef press, for the use of invalids, from which, by its peculiar construction, great power is easily obtained, so that the juices only, of the meat are pressed out



leaving the tissues in the press; nurses and others who used it spoke highly in its praise as the best press ever invented for this purpose. He also invented a process for the mounting and preservation of fish, for use in the study of Natural History, in which science he was greatly interested. It was exhibited both in this country and abroad, and was greatly admired for its beauty and perfection.

Many museums of natural history have specimens prepared by him, or those taught by him, and can be seen at the British Museum, Vienna, Berlin, Washington, Boston and elsewhere.

After his retirement from active practice of medicine in 1878, he traveled extensively, both in this country and abroad, and being a gentleman of unusual scientific and literary tastes came in contact with many eminent men.

In 1889 he returned to this country, making Boston his home, and died of heart disease at his summer residence at Northeast Harbor, Mt. Desert, Aug. 10, 1890, leaving two daughters. He was a gentleman of the old school, gentle, lovable and trusted by those to whom he was called to minister in the sick room, learned, cultivated and interesting in social intercourse, and while he himself led a life of strict integrity, was always charitable toward the faults of others. He believed in no set religious creed, but considered a man's best enjoyment on earth and the judgment of his fellow men hereafter came from his own well doing.

In 1860 Charles H. Davidson, who was carrying on business in Charlestown, Mass., in a very limited way, died, having a short time previously sold out to his nephew, Hamilton D. Lockwood, all the patents, tools and materials used in manufacturing the Davidson syringe.

H. D. Lockwood had served an apprenticeship under his uncle, Amos D. Lockwood, an acknowledged expert in the building of mills and manufacturing of cotton goods, who, recognizing his nephew's mechanical ability when a boy, persuaded him to adopt cotton manufacturing, and under his uncle's directions he drafted the buildings and machinery of some of the largest cotton mills of the country. The close application, however, which he gave to his work so undermined his health that he was obliged to give it up and seek for some different occupation, and so he became identified with the rubber business.

At once he began to reorganize the business by putting it on a firmer and more active basis, infringing parties who had defied the protests of Mr. Davidson were ordered to discontinue at once the manufacture of the Davidson syringe. The best legal talent in the country was retained, and suit at once begun and pushed vigorously.

The legal battle lasted for a number of years, but the infringing parties were obliged to give up one position after another, until finally after an appeal to the Supreme Court at Washington, in which the decision was rendered against them, they gave up the contest and Mr. Lockwood was left in full possession of the field, and they were obliged to pay him damages to a large amount.

In 1858 Rhodes Lockwood, the present owner of the Davidson Rubber Co., having just left school, entered the

employ of his uncle, Charles H. Davidson, as a book-keeper, but the limited business would not allow him to remain permanently at a fair compensation, so he left in about six months and entered a store in Boston. Soon after H. D. Lockwood purchased the business from Mr. Davidson, he was ordered by his physician to go abroad for a rest and drop the cares of business, and again Rhodes Lockwood became connected with Davidson Rubber Co., as his brother requested him to look after the business during his absence, which lasted about eight months, he doing the work after the regular business hours of the day and still retaining his position in Boston. When the patents on soft rubber expired H. D. Lockwood immediately put in the machinery necessary for manufacturing, for up to this time he had been obliged to buy all his rubber parts from the patentees. He soon found that the increased cares of the business were telling on his health, and he finally persuaded his brother Rhodes to leave the prominent position he occupied in the employ of Francis Skinner & Co., the largest dry goods commission house in the country, with whom he had been for seven years, and enter in an equal copartnership, which was formed Feb. 1, 1868, under the name of H. D. & R. Lockwood.

At the time this copartnership was formed they built the factory they now occupy, although they found it necessary a few years later to add to it. They soon manufactured a full line of druggist sundry and fine rubber goods of the highest grade, making it a rule to use nothing but the best rubber and skilled workers. They became celebrated for this class of work and for that reason received orders from all parts of the world.

In 1875 H. D. Lockwood died, leaving his brother Rhodes alone in the business, but on Jan. 1, 1876, he took into partnership with him his brother Philip C. Lockwood, under the firm name of R. & P. C. Lockwood. Philip C. Lockwood was formerly in the wholesale wool business and was burnt out in the great Boston fire, after which he traveled extensively for two years in Europe and then became connected with the Davidson Rubber Co., attending to the selling and financial part of the business.

January 1, 1895, Philip C. Lockwood retired, leaving the business to his brother, who again became the sole owner under the firm name of Rhodes Lockwood & Co.

All these many years they have been known to the trade as the Davidson Rubber Co., increasing their line of goods from time to time, as the demand for fine goods grew, introducing many new and original articles both in soft and hard rubber.

Rhodes Lockwood, who has been a member of the firm for over twenty seven years, occupies the position in the Davidson Rubber Co. as President, and has his headquarters at the works, where his long experience in the manufacturing department enables him to keep up the high reputation they have always enjoyed, while his son William N. Lockwood, as treasurer, having served at the factory and office for over seven years, attends to the selling, buying and general run of the business at the office of the company No. 19 Milk street, Boston.

# A DOZEN MEN TO FIT

A RUBBER SHOE?

YOU——

THE RIGHT SIZE  
AND WIDTH UPON  
YOUR CUSTOMER'S  
FOOT MUST PLACE

AND ELEVEN  
OTHERS——

ALL SKILLED IN EVERY STAGE  
HAVE MADE THIS RUBBER SHOE  
TO FOLLOW THE NEEDLE TOE LINES  
AS THE GLOVE THE HAND



IF THE **MEN'S NEEDLE TOE BERWICK** YOU BUY

We are with you from the start, and our skilled workmen aid in making a shapely Rubber Shoe that fits from heel to needle toe.

THIS IS OUR BUSINESS.

**BOSTON RUBBER SHOE COMPANY.**



## IS IT EVER ABSOLUTELY NECESSARY

to use poor belt? If you want one that will not stretch, will not break, will not come apart in the plies, you are demanding (although you may not know it) the best rubber and the strongest duck. These materials are expensive, consequently a belt made of them costs more than one made of cheap rubber and light duck. But at the end of three or four years the dear belt is giving good service, the cheap belt is in the scrap pile; which one has cost you the most? And is it not worth while also to remember that a cheap belt means a possible break-down just when you are busiest, and can least afford it? So much for our quality; now for variety: We make every sort of belt for which there is a demand, including not only the regular kinds, but also the special belts used by paper mills, elevators, etc.

### INCIDENTALLY

we would like to remind you that we make Fire, Steam, Air Brake, Suction, Engine and Garden Hose, Sheet and Piston Rod Packings, Tubing, Valves, Rolls, Matting, Jar Rings, Moulded Goods, the Vulcanite Emery Wheel and the League Bicycle Tire—in fact rubber goods for every mechanical use.

See that your goods bear one of these trade marks:



# NEW YORK BELTING & PACKING CO. LTD

PIONEERS AND LEADERS.

NEW YORK CITY.

Goods are best. Prices are right.  
Send for our new catalogue.

*Mention The India Rubber World when you write.*

## WANTED, A NEW FOREIGN POLICY.

(Continued from page 306.)

But there was an item of newspaper news in New York lately which may be noticed here. It related to one of those frequent shipments of gold which paralyze Wall street and the government at Washington, make it necessary for banking syndicates to come to the rescue of the public treasury, and create public discontent at the charges made by the financiers for their help. The shippers of this particular lot of gold are importers in New York of Brazilian coffee and India-rubber, and the newspapers mentioned—as if it were surprising—that they needed to make a large remittance to Europe. Of course they did. That is the usual reason for gold shipments. We have been too busy discussing “the Monroe doctrine” and other questions of foreign policy to care whether our cottons and our hardware and a hundred-and-one other articles needed in Brazil are taken by the latter country in exchange for such of its products as we are obliged to use. On account of our neglect foreigners supply these wants, and we now and then nearly upset our national credit in sending away gold money to pay the bills. Europe can afford to laugh at our Monroe doctrine as long as the trade reports make such a showing as they did in 1892 (and that was no exceptional year), viz.:

The United States bought from Brazil merchandise valued at.....	\$118,633,604
And sold to that country domestic merchandise valued at only.....	14,240,009
Great Britain bought Brazilian products only to the value of.....	\$17,559,705
But exported her own products to Brazil amounting to.....	39,551,630

[Other European countries likewise found a market in Brazil for their products to an extent equal to or exceeding their imports from Brazil.]

There is no cause for pride to patriotic Americans in this showing. There would have been in a showing of direct exports of American goods for every pound of India rubber and coffee from Brazil, all shipped under the American flag (on the Amazon as well as on the Atlantic), with the expenses of exchange, cable despatches, etc., so controlled as to afford profits on American capital. Until we can try for such conditions as these, the less said the better about our “foreign policy,” and especially in relation to the other countries on American soil.

## NAVIGATION OF THE AMAZON.

AT the twenty-third ordinary general meeting of shareholders of the Amazon Steam Navigation Co., Limited, held in London on June 26, a satisfactory report was made on the preceding year's business. The company hold invested in consols some £323,000, a large part of which it is proposed to expend for additional steamers on the Amazon, should certain negotiations with the government, now in progress, be concluded on terms satisfactory to the company. The company are still working under a provisional contract—receiving subsidies from the federal government of Brazil and from the states of Amazonas and Pará—while in treaty for a renewal of their contract for a term of five or more years. A dividend was declared which, added to that paid in January last, brings the distribu-

tion up to 7 per cent. on the company's business for the year 1894, this being the yearly average rate since 1887. The amount distributed in dividends on this basis is £35,366 12s. for the year.

\* \* \*

THE Amazon Telegraph Co., Limited, is the name of a company lately registered in England, with a capitalization of £250,000, divided into 25,000 shares of £10 each. An annual subsidy of £17,125 is granted by the Brazilian government for twenty years, payable quarterly in gold. The object of the company is to carry out the long-cherished idea of connecting Manáos and Pará by telegraph. Once before the idea seemed to be nearing realization,—telegraph-poles had been erected for nearly half the distance and a quantity of material had been collected,—when a trusted agent of the construction company ran away with the funds. It has since been determined that a submarine cable up the Amazon would be preferable, and this is what the new company propose to construct. As already indicated in the pages of this journal, telegraphic communication between Manáos and Pará will be, to the India-rubber trade, second in importance only to the navigation of the Amazon.

\* \* \*

A contract, dated July 5, 1895, has been made between the Amazon Telegraph Co., Limited, and Siemens Brothers & Co., Limited (London), for the construction and laying of the cables, and provision of apparatus, repairing of machinery, etc., the system to be handed over in complete working order for a consideration of £211,000. The total length of the cables will be about 1365 miles, and, by the terms of the contract, they are to be completed and laid by or before March 1, 1896. At Pará the cable will join the land-lines of the Brazilian government and the Western and Brazilian Telegraph Co.'s cables connecting with the rest of Brazil and the Argentine republic, and, by the cables of the Brazilian Submarine Telegraph Co., will be placed in communication with Europe and the world's telegraph system generally. The cable business of Pará during 1894 amounted to 725,000 words; with the addition of communication with Manáos it is expected that a heavy increase will at once occur.

## “NO. 31-3.”

THE variety of Singer sewing machines for manufacturing purposes has grown so large that they are now classified and catalogued by numbers. Their latest machine for general stitching of rubber or cloth is called “No. 31-3,” the first number referring to the distinct class or type of the machine and the second to its order in this class.

This machine is claimed by the manufacturers to be the acme of perfection and the fastest lock-stitch machine in the market. Its simple and effective design enables the easiest adjustment and secures least liability to derangement. The excellence of materials and workmanship guarantees greatest durability and least cost for repairs. The increased quantity of its production and economy of its operation are so far in advance of all preceding it that all manufacturers will find an examination of its merits essential to their interests.

ACCORDING to a memoir on India-rubber by Dr. A. Ernst, professor of botany in the University of Caracas, Venezuela, the use of this substance by the Indians on the upper Amazon was discovered by a Carmelite missionary, Manoel de Espranza, during the latter part of the seventeenth century. No scientific notice of India rubber was made, however, before 1751, when La Condamine made his celebrated report to the French Academy of Sciences.

## THE PROPER DIAMETER OF FIRE-HOSE.

By B. L. Stowe,

Vice-President of the Eureka Fire-Hose Co.

THE question of size is far from being the least important one which confronts the purchasers of fire-hose. It is of course desirable that the largest-sized streams possible should be available in case of fires, and it would be easy to construct estimates of the annual saving in fire-losses which might be effected, under certain conditions, with hose of greater diameter than is now in general use. Or it might be shown how great a proportion of the water discharged through a hose of small diameter is evaporated as it falls in spray through the flames, thus becoming useless for fire-protection. But the real problem is one of practicability. For instance, when it is considered how greatly the weight of a fire hose carrying a stream of water increases in proportion to its increase in diameter, it is plain that a limit may easily be reached, beyond which the present race of firemen will not be capable of handling the hose effectively. The purpose of the writer is not, however, to discuss these various points, which have already been treated more or less exhaustively,—for instance, by Mr. John R. Freeman, in a paper before the American Society of Civil Engineers.\*

My purpose is rather to introduce a new consideration, regarding the effect of different sizes upon the wearing qualities of fire-hose. When the very severe conditions that fire-hose has to meet in service are taken into account, it becomes a matter of some moment whether the severity of these conditions and the cost of equipment would be unduly increased by an increase in the diameter of hose. The writer, for one, for reasons growing out of this consideration, is doubtful whether the present standard diameter of fire-hose should be increased. He feels confirmed in this position by the belief that larger hose than that in general use would in most cases be less satisfactorily handled by the firemen, the extra weight seriously handicapping them in their work.

First may be considered the rapid increase of the weight of hose and of its contents in proportion to its diameter. The contents of a foot of length of  $2\frac{1}{2}$ -inch hose are 58.905 cubic inches, while a 3 inch hose—not appreciably larger to the unpracticed eye—contains 84.8232 cubic inches. The cubic contents of a  $3\frac{1}{2}$ -inch hose are almost twice as

great as those of a  $2\frac{1}{2}$ -inch hose, and of course the weight is proportionately increased. The bearing of these figures is upon the abrasion which hose must experience in being dragged over the ground, across curbstones, and through windows and other openings into buildings. Since an increase in the diameter of hose does not appreciably enlarge the area of contact, it is plain that a given amount of hose surface has a greater wear to resist in a larger than in a smaller hose. In order to overcome this objection, the larger hose must be greatly strengthened, with the effect of adding materially to its weight, and at the same time lessening its flexibility.

The second point is with regard to the increased strains put upon hose under curvature, as the diameter of the hose is increased. This is important, since all fire-hose, in practice, is liable to be subjected to curves. The subject may be more readily understood by means of an accompanying drawing, which represents (1) a piece of  $2\frac{1}{2}$ -inch hose curved to a radius of 24 inches; (2) relative increases of diameter up to 5 inches; and (3) the extra strain put upon the periphery of the curve with each addition to the diameter. In one-fourth of a circle formed of  $2\frac{1}{2}$ -inch hose, with a 24-inch radius, the inner circumference of the hose [a, b] is 37.6992 inches, while the outer circumference [c, d] is 41.6262 inches—a difference of 3.927 inches. In a table which follows the greater strain upon this stretched side or periphery of the hose is indicated for each additional half-inch in diameter up to 5 inches. If the size of the hose be increased to 3 inches, the outer circumference, or periphery—in a section of the same length as before—will be 4.7124 inches greater than the inner circumference; in a  $3\frac{1}{2}$  inch hose the outer circumference will be 5.4978 inches greater, and so on. These figures show the greater strain put upon the material in the hose by the curvature, as the diameter is increased, and its lessened resistance to water-pressure, but this is not the only point to consider. The table also gives the ascending scale of increased longitudinal strain per inch upon the hose with increased diameters, this becoming greater as the strength of the hose is diminished for the reasons given above.

My own conclusion, reached after much investigation, is in favor of  $2\frac{1}{2}$ -inch leading hose for fire-department use. It is true that there may be advantages in the use of

\* "Experiments Relating to Hydraulics of Fire-Streams"—Transactions, Vol. XXI, pp. 303-482.

## COMPARATIVE DIMENSIONS OF FIRE-HOSE OF VARIOUS DIAMETERS.

[NOTE.—The computation of strains in this table is based upon a pressure of 200 pounds per square inch.]

Diam. of Hose, Inches.	Circumference of Hose, Inches.	Area of Section, Sq. In.	Comparative Area, Per cent.	Volume per foot of Length, Cu. Inches.	Weight of Water per foot, Ounces.	Whole Longitudinal Strain, Pounds.	Longitudinal Strain per inch of Periphery.	Lateral Strain per inch of Length.
$2\frac{1}{2}$	7.854	4.9087	100	58.905	34.08	981.75	125	250
3	9.4248	7.0686	144	84.8232	49.084	1413.72	150	300
$3\frac{1}{2}$	10.9956	9.62115	196	115.4538	66.813	1924.23	175	350
4	12.5664	12.5664	256	151.7868	86.687	2513.28	200	400
5	15.708	19.635	400	235.62	136.354	3927.	250	500

larger hose for special purposes—on account of the greater volume of water that may be controlled, or the throwing of a large stream for a greater distance in a straight course than is possible with  $2\frac{1}{2}$ -inch hose. But in making the larger sizes of hose it will not be found sufficient merely to increase the weight of the hose in proportion to the diameter; the increase of weight should at least be proportionate to the squares of the diameters. The experience of fire-departments generally has demonstrated the convenience with which  $2\frac{1}{2}$ -inch hose may be handled, and, in general, the efficiency of streams from hose of this size. The objections to greater diameters may be summarized under five heads:

I. Greater liability to abrasion, from increased weight without increased area of contact.

II. Greater liability to weakness from stretching in curvature.

III. Greater weight.

IV. Less flexibility.

V. Greater length of time required for thorough drying.



CURVATURE OF FIRE-HOSE.

[NOTE.—This table shows the inner and outer circumference—or periphery—of fire-hose of various diameters, curved to a radius of twenty-four inches, the length being given for one-fourth of a circle. The computations are for the interior dimensions of the hose alone, without reference to the material.]

Diameter of Hose.	Circumference.		Excess of Length of Periphery.
	Inside.	Periphery.	
$2\frac{1}{2}$ inches . . . . .	37.6992	41.6262	3.927
3 " . . . . .	"	42.4116	4.7124
$3\frac{1}{2}$ " . . . . .	"	43.197	5.5978
4 " . . . . .	"	43.9824	6.2832
5 " . . . . .	"	45.5532	7.854

As for the manufacturers' position, there is little difficulty in making new hose, even of large diameters, of sufficient strength to withstand good pressures. There is usually a much better margin of strength in warp than in weft, but in use the warp receives the whole effects of wear and tear and protects the weft of the ply to which it pertains until the warp itself is destroyed. It is for this reason that large hose, in which the warp is subject to so much more strain and abrasion than in  $2\frac{1}{2}$ -inch hose, deteriorates so rapidly. While, as Mr. Freeman states, " $2\frac{3}{4}$ -inch hose needs to be but 10-per-cent. stronger than  $2\frac{1}{2}$ -inch" when new to withstand an equal pressure, it must have an additional margin, and a considerable one, to withstand the increased effects of wear and tear, due to a 21-per-cent. increase in weight of contents and longitudinal strain.

## RECLAIMING WASTE RUBBER.

IN the busy town of Shelton, Conn., is situated a plant that has well been called "the ideal Rubber Reclaiming Works." THE INDIA RUBBER WORLD man visited it recently on invitation, and was given the privilege of looking through the various departments. He examined the intricate processes to which the waste rubber is subjected in the course of its conversion into the finished product—a product, by the way, which is now used to a very large extent by manufacturers of rubber goods in this as well as in foreign countries.

A few years ago the original plant, owned then by the Derby Rubber Co., and leased by the now dissolved Rubber Reclaiming Co., was entirely destroyed by fire. In its stead a new and modern factory was erected on spacious grounds, and equipped with the latest and most improved machinery for extracting rubber from old rubber boots and shoes. The plant itself is so arranged that the rubber is handled exclusively by machinery. This prevents the dust which is such a common feature of most rubber factories from coming in contact with the rubber and thus renders it perfectly clean and free from the injurious substances which usually mix with it in the process of manu-

facture wherever the old-time handling and old-fashioned methods are in use. The mill is run mainly by water power furnished by the Ousatonic Water Co. and is lighted throughout with electric lights furnished by its own plant. It has a capacity for manufacturing twelve tons of reclaimed rubber daily. The location (about 70 miles from New York city) on the banks of the Ousatonic river affords excellent shipping facilities. The

river is navigable and a railroad siding on the grounds enables the shipping department to load vessels or into the cars direct from the factory.

The main office of the U. S. Rubber Reclaiming Works is in the Downing Building, 106-108 Fulton street, New York. The owners and operators of the concern are men well known in the rubber trade, having formerly been connected with the Rubber Reclaiming Co. Mr. Royal M. Bassett is President; Mr. Max Loewenthal, Treasurer; Mr. N. Kauffman, Secretary; and Mr. Theodore S. Bassett, Selling Agent.

## A GREAT TIRE INFRINGEMENT SUIT.

AN important legal contest may be the result of an action which has lately been instituted by the North British Rubber Co., Limited, against the Pneumatic Tyre Co., Limited, by which name the company is known which controls in Great Britain the Dunlop tire patents. The great Edinburgh concern claims that its "clinker" patents cover the general principles embodied in all the detachable tires now on the market, and that the Dunlop-Welch tires are, therefore, an infringement. The Dunlop people have accepted service of a writ by the North British company, and the case will be fought out in the Court of Queen's Bench in due course. Not only is the question of final control of these patents one of importance, so great has the bicycle trade become, but each of the two litigants is strong, financially, and able to employ costly legal talent. The decision will involve the Dunlop tire interest in America.



## AN AFTERNOON IN STOUGHTON.

AS far back as 1877 a young man rented a store window on Washington street, Boston, and put in it an aquarium full of gold fish. The fish were not at all unusual, but the pond in which they lived was unique, for the reason that it was made of smoothly coated gossamer cloth. This aquarium was responsible for the formation of the present Stoughton Rubber Co. The process of evolution was simple. Mr. J. B. Parker saw the cloth, hired the man who made it, formed the Mystic Rubber Co., which was followed by the Mystic Rubber Mfg. Co., and later consolidated with the Hall Rubber Co. and incorporated under the name of the Stoughton Rubber Co.

The works, as the name implies, are located in the town of Stoughton, Mass., on the line of the New York, New Haven & Hartford R. R. and about 18 miles from Boston. The history of the company is of extreme interest in many ways. The second to begin the manufacture of gossamer rubber garments when the craze was on for that style of rain-shedder, the company soon took first place for reason of its progressiveness. It was first to discard the old-fashioned foot power sewing machines and substitute those run by steam power. It was also the first to turn its back upon the prevalent solarizing process and introduce vulcanization in dry heaters in its place. When the gossamer garment was displaced by the mackintosh the Stoughton came to the front at once as large and popular manufacturers of both ladies' and gentlemen's garments.

A visit to the factory gives one a good idea of the amount of work done and the excellent results attained. Under the kindly care of Superintendent Burnham, the writer recently was shown through the works and as a result bore away the impression of a very pleasant visit and a notebook full of facts of interest.

Naturally the first of the visit was spent in examining the motive power, which consists of four boilers of 400 h., an engine of 250 h., a 350 light dynamo, and a huge duplex fire pump. From there the visitors went to the grinding room, where the crude rubber is washed and compounded. Here are a mammoth washer and ten mixing mills. At one end of the room, near enough to be within easy reach of the mixers, are ranged five huge churns that are used for preparing the stock for the English spreading machines. Each of these churns has a capacity of 500 gallons. In addition are four smaller ones, used for special compounds. Near by is the calender room, with two 3-roll calenders and two embossing machines for graining and pebbling carriage cloth. A huge room set apart from the calender and grinding rooms is devoted to the spreading of the cloth for the mackintosh work. Here are four "knife machines" with the latest improvements and capable of turning out more work than a dozen of the old type could possibly accomplish.

The cloth when spread goes at once to the cutting and making up departments. These departments are fitted with the latest machines for facilitating rapid and accurate work and are also run on a system as perfect and rigid as that employed by any of the great ready-made clothing houses. There are in constant use here two hundred stitching machines, eight Ruse

button hole machines, three Philadelphia barring machines binders, special two-needle machines, etc., etc.

In the making up of the garments every care is taken that the finish be perfect, and that no part be slighted. An instance of this is shown in the method used to insure even the needle holes from being tiny leak holes, as the sewing is done before the cement is fully dry, the thread thus being coated with cement, and the seam afterwards carefully strapped.

The plant for steam vulcanizing the goods consists of three great rooms lined with steam pipes. One of these is for curing the cloth that is made up into garments after vulcanization, the others for curing the rubber in mackintoshes made up from uncured coated cloth.

One can get perhaps the best idea of the extent of a business of the kind by visiting the store house where is kept the raw stock. A new brick building for the storage of fabrics ready for coating at the Stoughton tells the whole story. Here are rolls of cloth of all shades, textures, and prices, piled from floor to ceiling. At the time of the visit chronicled here there were more than 600,000 yards of cloth in stock awaiting the spreader.

In addition to the two hundred and fifty odd hands employed at this factory, a force is kept at work in Boston, stitching garments that are cut at Stoughton. The trade that the company seeks and has so successfully secured is that of the representative houses in all parts of this country that deal in the very finest gar-

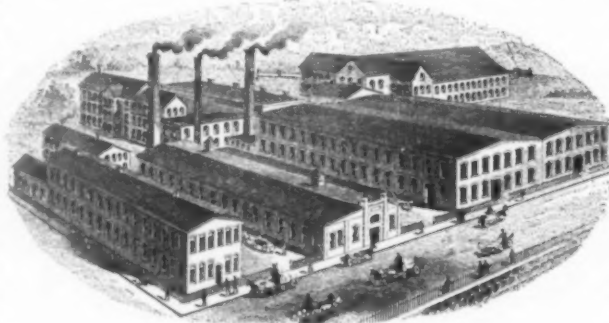
ments and that appreciate the best of work.

## RECEIVERS FOR TWO RUBBER COMPANIES.

ON the application of sundry creditors of the Trenton Rubber Co. the Court of Chancery at Trenton on August 3 appointed a receiver for that company, naming John D. Rue, a retired merchant. At the same time, on account of similar proceedings, a receiver was appointed for the Eastern Rubber Manufacturing Co., in the person of Samuel Walker, Jr., a lawyer and the county collector. A majority of the stock in each of these companies is owned by Frank A. Magowan, who is the president and general-manager of each. The application for receivers was precipitated by the filing against Mr. Magowan of several small claims of a personal character, but as his private affairs were more or less identified with the financial interests of some of the manufacturing companies with which he is connected, the two rubber concerns above mentioned were named with him as defendants in the suits.

Mr. Magowan was not in Trenton while these proceedings were taking place, but arrived at home on Sunday evening, August 4. On the following Tuesday, in the office of his counsel, Garret D. W. Vroom, at Trenton, he said to an INDIA RUBBER WORLD man:

"What has been done here was without my knowledge until after my return from a necessary absence from home, on private affairs. It is an unprecedented thing in New Jersey for a receiver to be appointed for a manufacturing company with such haste as in this case. Had I been here the appointment of receivers would have been unnecessary, for both the rubber companies are doing a paying business, there are no mortgages on



FACTORIES AT STOUGHTON, MASS.



their property, and they can pay every claim in full. I am completing arrangements to have the receivers discharged this week. By to-morrow or next day the Eastern Rubber Manufacturing Co. will be out of the hands of the receiver, and by Saturday the Trenton Rubber Co. will be. The first thing that I did after getting home was to send out circulars announcing that orders would be accepted and filled without any interruption from the appointment of receivers. Not only are these two companies able to take care of their own bills, but my other affairs are in such shape as to make it unnecessary that they should be involved. I have never yet been connected with any company that failed."

Under the statutes of New Jersey relating to manufacturing companies in the hands of receivers, "it shall be lawful for such company to enter into an agreement with its creditors for a settlement . . . and after such agreement shall have been signed by not less than two-thirds in amount of the valid claims against such company, said agreement shall be binding upon all of the creditors of such company the same as if they had all signed, to the end that the receiver may be discharged by the chancellor, and the effects and property of the company restored to its own possession." It is this statute which Mr. Magowan has taken advantage of in arranging the affairs of his companies.

"The people of Trenton," said a citizen, "are confident that Magowan will succeed in gaining control of his properties, and they will be pleased, whether friends or foes, to see him do so, in the belief that the rubber industries which he has built up, and which have been so beneficial to the city, will prove more successful in his own hands than in those of another."

The Trenton Rubber Co. dates from 1880. Its incorporation occurred on May 6, 1886, when the capital stock amounted to \$100,000, divided into 330 shares each in the name of Allen Magowan, Spencer M. Alpaugh, and Frank A. Magowan, and 10 shares in the name of William P. Hayes. On November 11, 1887, a certificate was filed with the secretary of state recording an increase of capital to \$200,000. Subsequently, on the death of Alpaugh, Frank A. Magowan purchased the shares standing in his name. William P. Hayes is the secretary and treasurer of the company.

The Eastern Rubber Manufacturing Co., was incorporated January 9, 1893, with \$250,000 capital authorized and \$202,000 paid in, in \$100 shares distributed as follows: William H. Skirm, 600; Frank A. Magowan, 1200; Allan Magowan, George R. Cook, William P. Hayes, and William H. Skirm, Jr., 50 each; G. D. W. Vroom, 20. The plant used by this company is that of the defunct Hamilton Rubber Co. The secretary and treasurer is W. H. Serviss, who, since the recent retirement of J. A. Barnes as manager of the company has assumed the latter's duties in addition to his own.

#### THE INDIA-RUBBER INDUSTRY ABROAD.

AT the half-yearly general meeting of the India-Rubber, Gutta-Percha, and Telegraph Works Co., Limited, held in London on July 4, the directors' report was adopted, which provided for an *interim* dividend of 5s. per share, or 2½ per cent., which involves the distribution of \$62,500. It has been usual at the half-yearly meetings to declare an *interim* dividend of 5 per cent., with a further distribution at the end of the year based upon the showing of the books for the year's business. In the present case, in view of the conditions of business which had prevailed, "as a matter of prudence and precaution it was, in the judgment of the directors, not judicious to pay a higher *interim* dividend than one of 2½ per cent." In submitting the

report the chairman, S. William Silver, stated that extra care and great efforts on the part of the staff and every one engaged had been needed, in order that the volume of business of this large and varied concern might not be diminished. The works, at both Silvertown and Persan, had been fairly well employed during the half-year, with the exception of the submarine-telegraph departments, in which there had been no contract of importance to report. The paid-up capital of the company amounts to £500,000. The net profits last year were £41,961 15s. 9d. The reserve fund amounts, as at the beginning of 1895, to £450,000.

It has been suggested that the real reason for the reduced *interim* dividend of the company above named was that cash might be retained in hand for certain possible requirements of the company. The directors anticipate that, as their tender for the proposed Pacific cable—sent to Ottawa last October—was the lowest of all the six that were made, they will obtain the contract. At the meeting above reported, however, the chairman, in answer to a question, stated that no recent information had been received of progress in the cable scheme. It is understood that Stock Exchange quotations on the company's shares were only temporarily affected by the reduced dividend.

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At an ordinary general meeting of the W. T. Henley's Telegraph Works Co., Limited, held in London on June 14, the usual half-yearly dividend on the preference shares, at the rate of 7 per cent., was declared, payable on August 1, and also an *interim* dividend of 6s. per share on the ordinary shares, or at the rate of 6 per cent. per year. This was the rate on ordinary shares paid in 1894, but previously only 5 per cent. was paid. The share capital issued amounts to £98,370, of which £30,000 is in preference shares and £68,370 in ordinary.

\* \* \*

PROCEEDINGS in bankruptcy have recently been had respecting the Turner Pneumatic Tire Co., Limited (London), which was registered in May, 1893, with a nominal capital of £50,000. The basis of the company is the patents of Walter Turner, who has been the company's manager. Respecting the cause of the failure, Mr. Turner states that it was from an insufficiency of working capital. Reports are current, however, of irregularities by means of which subscriptions for some £15,000 in shares were treated on the books as *bona fide*, whereas they were not. Mr. Turner, however, disclaims any part in the financial management of the concern.

\* \* \*

THE firm of Eyre & Collins, rubber merchants at No. 57 Tithebarn street, Liverpool, has gone into bankruptcy. THE INDIA RUBBER WORLD has received a copy of the official receiver's statement, from which it appears that William John Eyre began business in 1868; that he became indebted in time to the late Thomas Collins to such an extent that the latter consented to become a partner of Eyre, though having a business of his own; that Collins died soon and was succeeded in the partnership by his widow, who never gave any attention to the business. The gross liabilities are stated at £16,436,—expected to rank at £7,957,—and the assets at £952 14s. The firm attribute the trouble to their burden of bad debts.

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AMONG the attractive exhibits at the fifty-sixth annual show of the Royal Agricultural Society of England, lately held at Darlington, was that of India-rubber goods shown by George Angus & Co., Limited, of Newcastle-on-Tyne. It included endless rubber belts for threshing-machines, varying in width from two to eight inches.

THE business report of the Austria-American Rubber-Factory Co. for the year 1894 shows that, in spite of the January strike and its consequences, the expectations indulged in for the year have been more than realized. The sales exceed those of the previous year by 150,000 florins. The credit for this increase is mainly due to the fact that the importance of the manufacture of pneumatic tires was timely recognized, and the tire manufactured by them—the "Continental" pneumatic—attaining a dominant position. The result was aided in no small degree by the course adopted by the factories of the Austria-Hungary monarchy checking the formerly wild competitions in technical goods. The business in rubber balls has fallen off considerably, but the profits derived from this article are larger than in the previous year, as at the convention of rubber-ball manufacturers the overproduction of them was checked. The prices of crude rubber in the last months of the year 1894 were firm and advancing, but the necessary material was obtained at favorable prices before the advance took place, which explains the high status of the crude-rubber account on the balance-sheet. A scarcity of water has been experienced heretofore, which was remedied by adding larger well capacity, and at present there seems to be no chance for this calamity. To fill all orders promptly and avoid expensive night-work, additional machinery had to be secured at a cost of 87,424.83 florins. The balance-sheet shows a gross profit of 197,615.20 florins, of which 34,814.46 were written off, 16,280.10 transferred to the reserve-fund, and 26,048.17 paid on royalties, so that a net profit of 122,117.09 florins remains, which authorizes a dividend of 13 per cent. The total reserves amount at present to 107,363 florins, which represents 12 per cent. of the capital stock. For the year 1895 a favorable result is in view.

The following is an extract from the report for 1894 of the United Hemp-Hose and Rubber-Goods Factories at Gotha, Arnstadt, and Dresden:

"Our manufacture of rubber goods was brisk during the whole year, and the sales of these goods increased by 80,000 marks, and would have done better had not the wet season destroyed the sale of garden hose entirely. Although the raw material retained a pretty high standard, the keen competition depressed the prices of manufactured goods considerably, and the reports of all the factories give this as one of the reasons for the shrinkage in profits. Our weaving department suffered particularly from the condition of the weather, and the brisk sale of hemp hose was stopped completely in June in consequence of the continued rainy weather, and the generally large sale of hemp hose for gardening and street sprinkling purposes was nearly all lost. This and the breaking out of the war between China and Japan, stopping the export trade to these countries for quite a while, are perhaps among the factors which lowered the prices of hemp hose to such a degree as to make the prospects of profits in this article very small; so our gross earnings of 460,380 marks on the stock account, in spite of a reduction of 12,032 marks of sale expenses has fallen off 23,814 marks. After deduction of expenses, interest of priority and reserve accounts, 183,862 marks remain, allowing a dividend of 9 per cent. for last year.

"Business in the past two months of the current year has not shown as much development as is usual for this time of year, but it is hoped that with the appearance of mild weather the shortcoming will soon be made up. Our needed supply of hemp yarn for the whole year we have been able to procure at even a less figure than last year, and the flax yarns can be bought at very reasonable prices. If business in general improves, and the deplorable credit conditions in the Balkan

states are so shaped as to make exporting to that country possible again, we may look for a good ending of the business year 1895."

ACCORDING to the business report of the Berlin Frankfort Rubber-Goods Factories, their sales have increased at all the factories about 11 per cent., excepting at the shoe factory at Gelnhausen. Prices had to be reduced on some of the principal articles of manufacture, especially on those intended for export. After making the necessary transcriptions, the amount of 135,793 marks remains, allowing a dividend of 8 per cent. to the stockholders. The current year proves to be satisfactory, keeping the three factories fully employed. The gain in business for the first two months of 1895 was a considerable one.

MESSRS. EKERT BROTHERS, since January 1, 1895, have conducted a store in Hamburg (Grim 12, and Freihafen, Pickhuben 6), for the sale of rubber boots and shoes made by the Boston Rubber Shoe Co. The large assortment consists of over 200 different shapes and widths, for all purposes, such as sea use, hunting, fishing, canal work, etc., as well as a large variety of overshoes. The public favors these goods very much on account of their light weight. The "storm slipper" is especially favored.

THE Leipsic Rubber-Goods Factory (formerly Marx, Heine & Co) have just issued their new price-list, which for its exterior and interior arrangement may be called a work of art. The enormous variety of goods, most of them elucidated by engravings, is astonishing. The list embraces 3100 numbers, of which about 3000 are for surgical and hospital use. The alphabetical arrangement of the list is very practical and much time and labor are saved by it.

#### THE USE OF RUBBER ON CRUTCHES.

CRUTCH armpieces are finished in various ways; many are covered with leather, many are finished in polished wood; one of the newest styles is a polished wood top finished in the shape of a cow's horn and so-called. There are patents on crutches, principally on one end or the other, the top or the tip. Rubber tips have been used for many years, but there have been various improvements in them. Formerly a piece of rubber was simply tacked on to the end of the crutch. An improvement on this was a ferrule on the end of the crutch and projecting beyond the end of it, forming a socket into which the rubber could be inserted. There is a clamp tip which can be opened and closed, so that the worn rubber can be taken out and renewed. Most of the rubber tips have openings into which ice spikes can be inserted in icy weather. A recent device combines ice spike, rubber, and ferrule in such a manner that the ice spike can be used or not, as desired.

#### A NEW KIND OF RUBBER HOSE.

THEY stood looking in the window of a rubber-goods store on Broadway, and from their general appearance one could tell that they hailed from the wilds of Hohokus.

"Silas," she said, clutching his arm, "there is something I have been wanting this long time," and she pointed to a sign which read: "Rubber garden hose sold here." "I think I'll go in and get a pair or two, for when I weed the flower-beds in the spring they'll keep my ankles from getting wet."

Then, taking a tighter grip on her partner's arm, she led him into the store.—*New York Morning Journal.*

## TRADE AND PERSONAL NOTES.

**G**EORGE PUCHTA, of the Queen City Supply Co., Cincinnati, Ohio, is agent for the Boston Belting Co. It is a well known fact that he is a most delightful story-teller.

Hence when he came to Boston a week or two since it was but natural that his friends there made up a party to show him what the Hub could furnish in the way of summer enjoyments. A yachting trip was decided upon, the party consisting of Mr. George Forsyth, Mr. George Whitmore, the editor of THE INDIA RUBBER WORLD, and the owner of the fine steam yacht, himself a rubber man, a genial host, and withal a good story-teller. To say that the party had a good time during their twenty hour trip is to state it too mildly. It was simply delightful from start to finish, and "Cincinnati" went home full of praise for Boston rubber men and their summer enjoyments.

—Mr. R. H. Thompson, who travels for the Clifton Rubber Manufacturing Co., Boston, has started on a three months' trip through Ohio, Indiana, Kentucky, and West Virginia.

—The Tyer Rubber Co., Boston, are sending out a very neat advertising novelty in the shape of a celluloid game counter, something that no one refuses.

—On August 6th Henry Werner & Co., of Detroit, moved into their new store at 194 Gratiot avenue. It is said that their new show-room is a feature that all visitors comment upon.

—Mr. Willis A. Darling, of the Boston Woven Hose and Rubber Co., accompanied by his wife and boy, are spending some little time at Camp Sunshine at Moosehead Lake, Maine.

—Mr. Chester J. Pike, sales agent for the United States Rubber Co., Boston, is off for a week at Old Orchard Beach, Me.

—Mr. E. H. Paine, sales agent for the United States Rubber Co., New York, is on his way for a week's shooting and fishing in the vicinity of Parlin's Pond, Me.

—Mr. William Symington, of the firm of Alden, Symington & Co., London, was a recent visitor to New York and Boston, and was entertained by Mr. A. H. Alden at his home in Cedarhurst, Long Island.

—Arthur W. Stedman, of the Boston house of George A. Alden & Co., having become secretary of the New York Commercial Co., expects to become a resident of New York about the 1st of September.

—Mr. John H. Cheever (New York) has recovered from his recent illness and is again in good health.

—Mr. J. Francis Hayward, treasurer of the Cable Rubber Co., Boston, is on a month's business trip through the West.

—A. C. Cattelle, of Cincinnati, has gone into the manufacture of mackintosh clothing and is doing quite a large business.

—E. H. Paine and W. S. Ballou of the United States Rubber Co. are members of the popular Hardware Club in New York, and exceedingly pleased with its dining arrangements.

—Mr. Hermann Reimers, of the firm of Reimers & Meyer, has taken the "Connecticut Cottage" at Seabright, N. J., for the season.

—Mr. J. J. Voorhees, treasurer of the New Jersey Car Spring and Rubber Co., has a cottage at Atlantic Highlands, N. J.

—Mr. Max Loewenthal, of the United States Rubber Reclaiming Co., New York, is spending the summer at Atlantic Highlands, N. J.

—Charles R. Flint, who was lately enjoying a vacation in England, is the subject of a lengthy sketch in the *South American Journal*, including a reference to his place in the India-rubber trade. He is also admitted to the "Portrait Gallery"

of that paper—a distinction reserved hitherto for natives of South America or Englishmen connected with enterprises there.

—The Boston Rubber Shoe Co. were lately reported to be turning out about 53,000 pairs of rubber boots and shoes daily at their two factories, and to have in hand enough orders to last for several months to come. An alarm of fire at the Edgeworth factory, on the morning of July 9, brought several thousand persons to the scene, but prompt work by the firemen prevented any loss worth reporting.

—The Colchester Rubber Co.'s plant, together with all the dwellings, has been purchased by Charles Taintor, formerly on the police-court bench in New York, who will, it is said, add some of the adjoining property and establish a silver-plating industry.

—The Hartford Rubber Works Co. will increase their plant this year by the addition of a three story brick fireproof building, 60x100 feet, to which will be attached a two-story office, of similar construction, 44x65 feet.

—The Easthampton Rubber Thread Co. are replacing an old engine with a new 300-horse-power Corliss-Harris engine, for which a substantial new foundation has been prepared.

—The New York Belting and Packing Co., Limited, on July 16 posted a notice at their Newtown (Conn.) mill that the wages of all the employes would at once be increased by an amount equal to half the reduction made in 1893, and that a full restoration of wages to the old scale would follow as soon as the condition of business would justify it. Later it was announced that the old wage-scale would be restored on August 1.

—The Philadelphia Rubber Works are defendants in an action brought by James C. Dunbar, who alleges that the noise, fumes, and smoke from their rubber-reclaiming plant (Nos. 2427 2429 Naudain street) have rendered his neighboring properties almost untenable and greatly depreciated their value.

—Mr. Wm. B. Banigan, manager of the Marvel Rubber Co. has just brought out a tiny molded shoe, a diminutive of the real Marvel, that is valued by almost any one as a souvenir.

—J. D. Joslin, superintendent of the Globe Rubber Co. (Trenton), was one of the visitors to Boston during the recent Christian Endeavor Convention, attending some of the meetings, and later taking a trip to the White Mountains.

—At a recent meeting of the stockholders of the Commonwealth Rubber Co. (New York), Mr. Samuel F. Randolph was elected president and treasurer, and Samuel F. Randolph, Jr., secretary.

—Mr. George E. Austin, manager of the Imperial Rubber Co. (New York), is also manager of the Imperial Cycle Co., and is having a good trade in bicycles. The office of the new company is 124 Liberty street, New York.

—A. J. Cahill, formerly with R. H. Wolff & Co., and the United States Tire Co., has been elected secretary of the Worcester Cycle Manufacturing Co., and is already showing the wheel that they will put on the market in '96.

—Mr. J. P. Elmer, the owner of a prosperous rubber store in St. Paul, Minn., has just returned from a three months' trip to South America, where he has been looking after certain landed interests that he has on the Orinoco river.

—Mr. H. O. Canfield, the rubber manufacturer of Bridgeport, Conn., and Theodore Bassett, sales agent for the United States Rubber Reclaiming Works, have adjacent summer cottages at Milford, Conn., and as a consequence have become more than ever neighborly.



—Mr. N. Kauffman, the new secretary of the United States Rubber Reclaiming Works, although a young man learned the diamond business thoroughly, made a great deal of money in it, and retired from it only when it came into the hands of the diamond syndicate.

—Percy S. Taylor, who is charged with committing forgeries amounting to \$8000 while employed as bookkeeper by Ellis & Golterman, rubber-goods manufacturers at No. 88 Leonard street, New York, was arrested recently in London and brought back to America.

—It is reported that the L. Candee & Co. (New Haven) have advanced wages to an extent equal to one-half the reduction of 1893.

—A rubber goods store has been opened at New London, Conn., by the G. M. Williams Co. It is the first enterprise of the kind in that town.

—Mr. C. S. Jicklings, connected with the office of the Metropolitan Rubber Co., at Wallingford, Mass., and Miss Josephine Massicotte, of Meriden, Conn., were married on July 1. They expect to reside in New York, where Mr. Jicklings will remain in the employment of the Metropolitan company.

—Mr. and Mrs. William Morse, of New York, are again summering at Lake George.

—The young women employed by the Boston Gossamer Rubber Co. maintain a relief society, which, during the past five years, has paid out more than \$1000 in sick benefits.

—The Queen City Rubber Co. have been incorporated at Buffalo, N. Y., by William G. Morse and John L. Choyer, of Buffalo, and Frank D. Hamilton, of Chester, Mass. The capital is \$7500.

—William Morse & Co., the Duane-street (New York) jobbers of "everything in shape of rubber footwear and mackintoshes," have sent out to the trade an attractive reminder in the shape of a booklet labeled "Are you Conducting your Business for Profit?"

—The manufacture of artificial limbs, involving the use of India-rubber feet and hands, as carried on by A. A. Marks in New York, gives employment to forty persons. It is claimed for this establishment that its capacity represents an output larger than the aggregate of any other ten artificial-limb factories in the world.

—The Eureka Fire Hose Co. (Jersey City, N. J.), though they made an important addition to their plant last year, are preparing to extend it still further this summer. An interesting feature of their work is the manufacture, upon their own premises, of the looms and other machinery used by the company. New machines are constantly in course of construction under the supervision of Vice-President B. L. Stowe, who has invented many of the devices used in the company's processes. Though the management of the extensive factory would seem to be enough to keep any man busy, Mr. Stowe finds time to serve his city as a member of the board of education, in which he represents the seventh district of Jersey City.

—The Goodyear Rubber Co. (New York) have kept in stock for a short time past the "O. C." and single-tube bicycle-tires manufactured by the Indianapolis Rubber Co. This new feature of their business has proved so satisfactory that they are likely next year to devote an important amount of attention to tires.

—The Liberty Rubber Shoe Co. (Setauket, L. I.) during July began turning out staple lines of shoes, after a busy and successful season in making tennis-shoes. Mr. Edwin Elberson, who is in charge of the business, at the New York headquarters, reports the receipt of more orders from important jobbing houses than the company are able to fill.

—It is said that the Millville mill of the Woonsocket Rubber Co. gives employment to operatives of no less than twenty-four different nationalities.

—Chicopee Falls, Mass., is to have a new bicycle-tire plant, with \$50,000 capital, to be backed, it is said, by Thomas G. Spalding, of a Jersey City firm now supplying materials to the bicycle trade. C. L. Pepper, who has been superintendent for the Overman Wheel Co. from their beginning, is expected to take charge of the new factory.

—E. E. Leach & Co. who have had a fine store at 47 Boylston street, Boston, for some time past, and who both wholesaled and retailed the Mandelberg mackintoshes there, have decided to give up retailing and after the first of July will locate themselves at the corner of Kingston and Essex streets, in the well known Brown & Durell building, where they will devote themselves to the wholesale trade only.

—The Lowell Rubber Co., Lowell, Mass., were fortunate enough to secure the whole contract for fitting the new Post-Office building there with hose, racks, and fittings.

—The Lycoming Rubber Co. (Williamsport, Pa.) were reported lately to be running at full capacity, averaging 5000 pairs of boots and shoes daily. Their product is of two grades—"Lycoming first quality" and "Keystone." The company have a branch warehouse at No. 177 Monroe street, Chicago, for supplying the trade of the west and northwest. The treasurer and manager of the company, Samuel N. Williams, took an active part in its organization, in 1882, and has been largely instrumental in its successes. He is interested also in other business enterprises, besides which he finds time to devote to public affairs and the improvement of his native city.

—The Apsley Rubber Co. (Hudson, Mass.) will extend their buildings toward the railroad, in order to increase their convenience in making shipments, and also to increase their floor-space by 4000 feet.

—The new calender-room of the National India Rubber Co. (Bristol, R. I.) is a notable addition to an already well-equipped plant. In the south end of the room stands a 1500-horse-power Corliss steam-engine, connecting with the shafting without the use of belts. There are four grinders 72 inches long and four 60 inches long, with a capacity for 50,000 pounds of rubber per day. The new friction calender is capable of running 30,000 yards of cloth in a day, coating both sides. The Knowles duplex pumping-engine recently placed in the company's engine-house is pumping 600,000 gallons of water daily and has a capacity for 700,000.

—The Standard Rubber Corporation (Campello, Mass.), according to a local newspaper, were one of the very few manufacturing concerns in that locality that kept running steadily throughout the dull times of the past two years. The same paper mentions that the company have never before had so many orders in hand as at present.

—Mr. J. Paget Sweeny, general manager of the Grappler Tyre Co., Dublin, was a recent visitor to the United States, and while here made arrangements with the Columbia Rubber Works Co., New York, to manufacture and push the Grappler tire.

—The Millville mill of the Woonsocket Rubber Co. was the scene of a fire on July 2 which Superintendent Gray believes would have resulted seriously but for the automatic sprinklers in the room where the fire started. Good work was also done with the fire-hose equipment in the mill. The loss was estimated at \$2500.

—The Peerless Rubber Mfg. Co. (New York) are snowed under by orders, the famous Rainbow packing of course taking the lead of their popular specialties.



—The Boston Belting Co. have recently been annoyed by some fraud in the West, who has been issuing checks signed H. B. Watson, Treasurer, drawn on the Traders' National Bank of Boston, and purporting to be the Boston Belting Co.'s checks. Four of these checks have been received so far. It is well known that there is no H. B. Watson, treasurer of the Boston Belting Co., nor is the Traders' National Bank in existence at the present time. The checks, therefore, are not forgeries, but simply bogus. So far three for \$75 each and one for \$150 have been discovered.

—Mr. George A. Alden, President of the New York Commercial Co., is taking an outing in Bangor, Maine, where he has had his horses and carriage sent, and is driving through the country.

—Mr. Harry B. Hall, formerly with the Stoughton Rubber Co., Boston, has accepted a position with the Ireson Rubber Co.

THE *Scientific American*, in an article on the influence of the new era of bicycling on a variety of industries, says that tire-making has led to the production of a naphtha free from paraffin or other oily matter for use in rubber cement.

\* \* \*

"FATHER," said little Danny Grogan, "why dooze they have the electric-light wires covered wit' rubber?"

"Oi am soorprised at your ignorance," said Mr. Grogan in answer. "They do be covered so thot the light cannot lake out av um."—*Indianapolis Journal*.

\* \* \*

AN attractive idea is expressed in the advertisements of one of the companies offering rubber-tired vehicles to the trade by the phrase "We carry the good roads in our tires," the inference being that it is easier to secure smooth running by investing in elastic tires than to try to reform all the highways.

## REVIEW OF THE INDIA-RUBBER MARKET.

DULLNESS has continued to be the characteristic feature of the crude-rubber market since the date of our last review. Deliveries of Pará have been very small. Islands fine, forward delivery and spot, has sold at 71 and 70 cents, and Islands coarse at 46½ and 46 cents; Upriver fine at 72 and 71 cents forward and 73 and 72 cents spot. It will be seen therefore that no fluctuation worth noting has occurred in prices. The world's deliveries for July show a falling off from the figures for the same month of last year of about 100 tons, or over 15 per cent. The receipts at Pará for July were 960 tons, against 680 tons for same month last year, an increase of 41 per cent., which would indicate that a considerable increase may be expected in the opening crop-year.

Manufacturers as a rule are well supplied, and as they feel that prices must decline, they will not anticipate their wants, but will run well into the new crop before buying freely.

The latest quotations in the New York market are:

Pará, fine, new t a...	71 @72	Benguela.....	45 @46
Pará, fine, old.....	77 @80	Kongo Ball.....	36 @40
Pará, coarse, new t a	46 @55	Cameroon Ball.....	36 @38
Caucho (Peruvian) strip	46 @47	Flake, Grd and Lump..	23 @24
Caucho (Peruvian) ball	51 @52	Accra Flake.....	15 @18
Mangabeira, sheet....	39 @42	Liberian Flake.....	26 @27
Esmeralda, sausage..	52 @53	Primest Pinky Madr...	58 @60
Guayaquil, strip.....	35 @44	Madagascar, black...	43 @45
Nicaragua, scrap ....	50 @52½	Borneo.....	26 @
Nicaragua, sheet....	49 @50	Gutta-percha, fine grade	1.30
Thimbles.....	34 @35	Gutta-percha, medium..	1.00
Tongues.....	35 @37	Gutta-percha, hard white	85
Sierra Leone.....	25 @42		

The statistical position of Pará rubber in New York and elsewhere is as follows, the figures expressing tons of 1000 kilograms:

	Fine and Medium.	Coarse.	Totals.	Totals 1894.
Stock, June 30 .....	292	74	366	= 1159
Arrivals, July .....	92	101	193	= 266
Aggregating.....	384	175	559	= 1425
Deliveries, July .....	144	104	248	= 337
Stock, July 31 .....	240	71	311	= 1088
			1895.	1894.
Stock in England, July 31.....			1045	1255
Deliveries in England, July.....			390	400
Pará receipts, July .....			960	680
Stock in Pará, July 31 .....			285	100
World's supply July 31 (excluding Caucho).....			2374	3061
Pará receipts since July 1.....			960	680

In regard to the financial situation Messrs. Simpson & Beers, brokers in crude India-rubber and commercial paper (New York), advise us as follows:

"Rates for mercantile paper remained unchanged during July, until the latter part of the month, when a rise set in of ½ @ 1 per cent. We now quote first-class rubber receivables at 4 per cent; first-class single names 4½ @ 5 per cent. from four to six months to run. Our banks are not eager buyers, unless on their own terms, as they look for better rates. Rates in Boston also have advanced ½ per cent."

### PRICES FOR JULY (ISLAND RUBBER).

	Fine, 1895.	Coarse.	Fine, 1894.	Coarse.	Fine, 1893.	Coarse.
First .....	72	47½	66	44½	67	42
Highest.....	73	47½	66	44½	67	43
Lowest.....	72	46	65	42	66	40
Last .....	72½	46	65	42	66½	42

The following Liverpool quotations for Africans of medium kinds are reported by mail, under date of July 27:

Kongo ball .....	1/9¾ @ 1/10	Axim and Assinee.	1/5¼ @ 1/5¾
Gaboon ball.....	1/5 @ 1/7	Cameroon Ball....	1/5 @ 1/8
Small tongue.....	1/2	Batango Ball .....	1/5¼ @ 1/5½
Bold tongue .....	1/5 @ 1/5½	Old Calabar .....	1/5 @ 1/5½
Flake.....	1/10¾	Sierra Leone Nig-	
lump Flake.....	1/11	gers.....	1/1 @ 2/1
Small ball.....	1/4½	Gambia Niggers,	
Thimbles.....	1/4¾ @ 1/5	prime.....	2/1 @ 2/2
Cape Coast and		Gambia Niggers,	
Saltpond.....	1/1 @ 1/3	low to fair.....	1/0 @ 1/9
Accra strips.....	1/11½ @ 2/0	Addah Niggers...	1/7 @ 1/7½
Accra biscuits, best		Benguela Niggers..	1/10¼ f.o.b.
quality.....	1/9¾ @ 1/10	Loanda Niggers...	2/5
Accra Common Soft	1/0½ @ 1/0¾	Manoh Twists....	2/2½
Accra Paste.....	7/2 @ 9	Mangabeira.....	1/5 @ 1/7

Sales were reported of 50 tons fine Pará at 3½ @ 3/1¼; 20 tons Thimbles at 1/4½; 18 tons Cameroons, 1/5½ @ 1/5¾; 20 tons Accra Strip, 1/11 @ 2/1½; 5½ tons Sierra Leone twists, 1/10 @ 1/10¼; 74 tons Rangoon, 1/6¾ @ 2/2½; 55 tons Buttons, 1/9¼ @ 1/9¾; 65 tons Benguelas, 1/10½; 15 tons Lagos, 1/5¼ @ 1/5¾.

According to a recent report on the crude-rubber market in London, "the importers had an idea that the manufacturers of pneumatic tires for bicycles and carriages would come to their rescue, or rather would have to, but in this they have been entirely mistaken, either by reason that the sales of tires are not as large as expected, or that a sufficient quantity of material is in the hands of the manufacturers, which seems to

be the principal cause, as our manufacturers have learned the art of mixing several African brands and have become less dependent on Pará rubber than formerly."

### IMPORTS FROM PARÁ.

THE receipts of India-rubber direct from Pará and Manáos at the port of New York since our last publication are reported in detail below, the figures referring to pounds:

July 7.—By the steamer <i>Egyptian Prince</i> , from Pará:					
	Fine.	Medium.	Coarse.	Caucho.	Total.
Reimers & Meyer .....	3,600	2,100	2,600	72,000	80,300
July 15.—By the steamer <i>Lisbonense</i> , from Pará:					
Reimers & Meyer .....			13,800	21,400	35,200
New York Commercial Co. ....	9,000	1,200	3,900		14,100
Shipton Green .....				13,800	13,800
Lawrence Johnson & Co. ....	1,800		9,000		10,800
Sears & Co. ....	2,900	200	3,200		6,300
George G. Cowl .....			4,200		4,200
Totals .....	13,700	1,400	34,100	35,200	84,400

July 23.—By the steamer <i>Gwangense</i> , from Pará and Manáos:					
New York Commercial Co. ....	41,300	4,300	18,000	4,500	68,100
Shipton Green .....	11,000	3,100	6,600	1,000	21,700
Reimers & Meyer .....			19,800		19,800

### OTHER NEW YORK ARRIVALS.

BELOW will be found in detail the imports at New York during July, 1895, of India-rubber from Mexico, Central America, and South America, other than Pará grades; also, arrivals at New York of African and East Indian sorts:

#### CENTRALS.

POUNDS.	
JULY 1.—By the <i>Finance</i> =Colon:	
A. Santos & Co. ....	8,563
J. Brandon & Bro. ....	4,100
Flint, Eddy & Co. ....	1,900
G. R. Cottrell & Co. ....	1,374
New York Commercial Co. ....	1,200
A. James & Co. ....	645
Piza Nephews & Co. ....	509
Total .....	18,291
JULY 1.—By the <i>Adirondack</i> =Cartagena:	
D. A. DeLima & Co. ....	3,000
JULY 2.—By the <i>Vigilancia</i> =Mexico:	
H. Marquardt & Co. ....	1,000
H. W. Peabody & Co. ....	500
F. Probst & Co. ....	300
H. A. Forrest & Co. ....	200
Total .....	2,000
JULY 1.—By the <i>Hudson</i> =New Orleans:	
Earle Brothers .....	4,500
JULY 2.—By the <i>Carib</i> =Truxillo:	
Eggers & Heinlein .....	2,000
Jose Agostini .....	500
H. W. Peabody & Co. ....	800
Total .....	3,000
JULY 3.—By the <i>Colombia</i> =Colon:	
Flint, Eddy & Co. ....	2,139
Eggers & Heinlein .....	820
Elmhurst & Co. ....	679
G. Amsinck & Co. ....	450
George R. Cottrell & Co. ....	200
Total .....	4,288
JULY 5.—By the <i>Lucania</i> =Liverpool:	
Windmuller & Roelker .....	14,000
JULY 9.—By the <i>Wordworth</i> =Bahia:	
Reimers & Meyer .....	5,000
JULY 10.—By the <i>Seguranea</i> =Mexico:	
Jose Agostini .....	2,000
H. Marquardt & Co. ....	500
Graham, Hincley & Co. ....	300
Total .....	2,800
JULY 11.—By the <i>Alliance</i> =Colon:	
A. Santos & Co. ....	7,000
I. Brandon & Bro. ....	1,400
Total .....	8,000

JULY 12.—By the <i>Regulus</i> =Belize:	
Eggers & Heinlein .....	1,000
Wallace Muller & Co. ....	300
Total .....	1,300
JULY 12.—By the <i>Newport</i> =Colon:	
R. F. Corawell .....	1,500
D. A. de Lima & Co. ....	1,240
J. M. Ceballos & Co. ....	1,417
W. Loaliza & Co. ....	440
Lauman & Kemp .....	410
G. Amsinck & Co. ....	394
A. P. Strout .....	119
Ellinger Bros. ....	115
Total .....	5,835
JULY 15.—By the <i>El Monte</i> =New Orleans:	
Earle Bros. ....	5,000
JULY 17.—By the <i>Seneca</i> =Mexico:	
H. Marquardt & Co. ....	1,500
JULY 15.—By the <i>Andes</i> =Cartagena:	
D. A. de Lima & Co. ....	4,500
Kunhardt & Co. ....	1,500
Isaacs & Samuels (London) ..	4,000
Total .....	10,000
JULY 22.—By the <i>Advance</i> =Colon:	
Munoz & Esprilla .....	11,274
New York Commercial Co. ....	9,400
A. Santos & Co. ....	8,090
Roldan & Van Sickle .....	5,035
Flint, Eddy Co. ....	7,704
G. Amsinck & Co. ....	4,400
Wallace Muller & Co. ....	3,400
W. H. Grace & Co. ....	2,210
A. M. Capen Sons .....	1,460
G. R. Cottrell & Co. ....	2,077
D. A. de Lima & Co. ....	1,200
Dumarest & Co. ....	1,018
F. G. Tomas .....	77
Total .....	57,375
JULY 22.—By the <i>Aiene</i> =Savanilla:	
G. Amsinck & Co. ....	1,300
JULY 23.—By the <i>Hudson</i> =New Orleans:	
A. T. Morse .....	8,500
A. N. Rotholz & Co. ....	2,000
Crossman & Bros. ....	500
Total .....	11,000
JULY 24.—By the <i>City of Pará</i> =Colon:	
Andreas & Co. ....	7,140
A. F. Strout .....	5,914
Piza Nephews & Co. ....	2,114
U. S. Commercial Crop Co. ....	238
Munoz & Esprilla .....	63
Total .....	15,467
JULY 24.—By the <i>Yucatan</i> =Mexico:	
H. Marquardt & Co. ....	1,500
Graham, Hincley & Co. ....	500
Schultz & Ruckgaber .....	200
Jose Menendez & Co. ....	200
H. A. Forrest & Co. ....	200
L. Monjo, Jr. & Co. ....	200
Total .....	2,800

Boston Rubber Shoe Co. ....	7,000	2,900	4,400	.....	14,300
Otto G. Mayer & Co. ....	.....	.....	10,200	.....	10,200
Lawrence Johnson & Co. ....	300	.....	7,800	900	9,000
P. Lima .....	2,100	.....	2,000	.....	4,100
Totals .....	61,700	10,300	68,800	6,400	147,200

July 28.—By the steamer <i>Carib Prince</i> , from Pará:					
Reimers & Meyer ..	20,700	2,800	7,800	55,600	86,900

August 2.—By the steamer <i>Justin</i> , from Pará:					
New York Commercial Co. ....	107,000	10,300	27,400	2,000	146,700
Reimers & Meyer .....	5,700	2,100	34,300	.....	42,100
Otto G. Mayer & Co. ....	10,100	4,200	14,200	.....	28,500
Shipton Green .....	2,000	.....	1,000	.....	3,000
Totals .....	124,800	16,600	76,900	2,000	220,300

July Imports from Pará .....	666,200
June Imports .....	1,030,100
May Imports .....	1,651,400
April Imports .....	2,156,400
March Imports .....	3,611,700
February Imports .....	2,274,400
January Imports .....	2,869,500

### PARA IMPORTS VIA EUROPE.

July 1.—By the steamer <i>Cevic</i> , from Liverpool:	
Reimers & Meyer (Coarse) .....	15,000

JULY 30.—By the <i>Adirondack</i> =Cartagena:	
D. A. De Lima & Co. ....	2,000
Munoz & Esprilla .....	800
Kunhardt & Co. ....	700
Total .....	3,500

JULY 29.—By the <i>Runic</i> =Liverpool:	
Reimers & Meyer .....	2,000

JULY 31.—By the <i>Vigilancia</i> =Mexico:	
Graham, Hincley & Co. ....	500
E. Steiger & Co. ....	500
Seeger & Guernsey Co. ....	200
Total .....	1,200

Total Centrals for July .....	183,366
Total for June .....	194,270
Total for May .....	317,000
Total for April .....	168,072
Total for March .....	290,283
Total for February .....	239,251
Total for January .....	341,029

#### AFRICANS.

POUNDS.	
JULY 1.—By the <i>Cevic</i> =Liverpool:	
Reimers & Meyer .....	20,000
JULY 5.—By the <i>Patria</i> =Hamburg:	
Reimers & Meyer .....	16,500
JULY 6.—By the <i>Maasdam</i> =Rotterdam:	
George A. Alden & Co. ....	13,500
JULY 9.—By the <i>Mohawk</i> =London:	
Reimers & Meyer .....	5,200
JULY 8.—By the <i>Tauric</i> =Liverpool:	
George A. Alden & Co. ....	90,100
American Wringer Co. ....	2,000
Total .....	92,000
JULY 12.—By the <i>Britannic</i> =Liverpool:	
George A. Alden & Co. ....	57,000
JULY 13.—By the <i>Etruria</i> =Liverpool:	
George A. Alden & Co. ....	39,300
JULY 15.—By the <i>Nomadic</i> =Liverpool:	
Reimers & Meyer .....	4,800
JULY 15.—By the <i>Mobile</i> =London:	
Gutta Percha and Rubber Mfg. Co. ....	7,700
JULY 17.—By the <i>Majestic</i> =Liverpool:	
William A. Brown & Co. ....	11,000
Otto G. Mayer & Co. ....	11,300
Total .....	22,300
JULY 12.—By the <i>Noordland</i> =Antwerp:	
Otto G. Mayer & Co. ....	2,200
JULY 12.—By the <i>Prusna</i> =Hamburg:	
Reimers & Meyer .....	4,000
JULY 13.—By the <i>Belgenland</i> =Antwerp:	
Otto G. Mayer & Co. ....	17,200

JULY 18.—By the *Peninsular*=Lisbon:  
George A. Alden & Co. .... 76,300  
Otto G. Mayer & Co. .... 21,700  
Hagemeyer & Brunn ..... 22,000  
Total ..... 120,000

JULY 19.—By the *Campania*=Liverpool:  
George A. Alden & Co. .... 9,000  
Reimers & Meyer ..... 17,000  
Total ..... 26,000

JULY 21.—By the *La Champagne*=Havre:  
J. D. Nordlinger ..... 2,900

JULY 22.—By the *Massachusetts*=London:  
H. H. Smythe ..... 1,300

JULY 24.—By the *Marengo*=Antwerp:  
Oelrichs & Co. .... 600

JULY 25.—By the *Germanic*=Liverpool:  
George A. Alden & Co. .... 4,000  
H. H. Smythe ..... 1,000  
Total ..... 5,000

JULY 26.—By the *Persia*=Hamburg:  
George A. Alden & Co. .... 11,800

JULY 27.—By the *Taormina*=Hamburg:  
George A. Alden & Co. .... 9,800

JULY 27.—By the *America*=London:  
Otto G. Mayer & Co. .... 2,000

JULY 29.—By the *Manitoba*=London:  
Windmuller & Roelker ..... 10,000

JULY 29.—By the *Runic*=Liverpool:  
Reimers & Meyer ..... 10,000

JULY 30.—By the *Aurania*=Liverpool:  
Otto G. Mayer & Co. .... 12,000  
George A. Alden & Co. .... 3,700  
Total ..... 15,700

Total Africans for July ..... 516,400  
Total for June ..... 322,600  
Total for May ..... 884,100  
Total for April ..... 367,200  
Total for March ..... 374,554  
Total for February ..... 441,500  
Total for January ..... 582,000

## EAST INDIAN.

JULY 2.—By the *Mississippi*=London:  
Wm. A. Brown & Co. .... 50,000

JULY 6.—By the *Paris*=Southampton:  
Otto G. Mayer & Co. .... 7,100

JULY 6.—By the *Europe*=London:  
George A. Alden & Co. .... 4,000

JULY 9.—By the *Mohawk*=London:  
William A. Brown & Co. .... 22,000

JULY 15.—By the *Nomadie*=Liverpool:  
George A. Alden & Co. .... 2,400

JULY 20.—By the *New York*=Southampton:  
Gutta Percha and Rubber Mfg. Co. .... 9,000  
Reimers & Meyer ..... 2,600  
Total ..... 12,600

JULY 29.—By the *Manitoba*=London:  
Wm. A. Brown & Co. .... 19,000

JULY 28.—By the *Madagaf*=Singapore:  
George A. Alden & Co. .... 65,300  
Reimers & Meyer ..... 45,000  
Robert Soltau & Co. .... 21,000  
Total ..... 131,300

JULY 30.—By the *Ontario*=London:  
George A. Alden & Co. .... 42,000  
Reimers & Meyer ..... 15,000  
Total ..... 57,000

Total East Indian for July ..... 305,400  
Total for June ..... 241,100  
Total for May ..... 118,300  
Total for April ..... 451,000  
Total for March ..... 487,300  
Total for February ..... 1,000  
Total for January ..... 28,800

## RECAPITULATION.

Pará—direct imports ..... 66,200  
Pará—via Europe ..... 15,000  
Centrals ..... 183,956  
Africans ..... 516,400  
East Indian ..... 305,400

Total at New York for July ..... 1,686,956  
Total for June ..... 1,788,070  
Total for May ..... 2,971,400  
Total for April ..... 3,142,872  
Total for March ..... 4,858,383  
Total for February ..... 3,060,151  
Total for January ..... 4,038,229

## BOSTON ARRIVALS.

JULY 1.—By the *Catalonia*=Liverpool:  
George A. Alden & Co.—Africans ..... 23,300  
Reimers & Meyer—Africans ..... 23,500  
JULY 3.—By the *Durango*=Hamburg:  
George A. Alden & Co.—Africans ..... 11,780  
JULY 6.—By the *Gallia*=Liverpool:  
George A. Alden & Co.—Africans ..... 56,400  
Reimers & Meyer—Africans ..... 20,000  
JULY 9.—By the *Michigan*=Liverpool:  
George A. Alden & Co.—Africans ..... 2,000  
JULY 12.—By the *Appomattox*=London:  
George A. Alden & Co.—Africans ..... 1,200  
JULY 16.—By the *Orman*=Liverpool:  
George A. Alden & Co.—Africans ..... 7,600  
Reimers & Meyer—Africans ..... 6,000  
JULY 21.—By the *Seythia*=Liverpool:  
George A. Alden & Co.—Africans ..... 6,850  
JULY 27.—By the *Cephalonia*=Liverpool:  
George A. Alden & Co.—Africans ..... 2,370  
To Order—Africans ..... 9,800  
JULY 27.—By the *Lancastrian*=Liverpool:  
Pettingill & Everett—Africans ..... 23,400  
JULY 29.—By the *Oranmore*=Liverpool:  
To Order—East India ..... 7,000

Total at Boston for July ..... 180,260  
Total for June ..... 185,920  
Total for May ..... 129,620  
Total for April ..... 138,560  
Total for March ..... 108,900  
Total for February ..... 127,100  
Total for January ..... 243,950

## NEW ORLEANS.

JULY.  
Nicaragua ..... 40 282  
POUNDS. VALUE.  
\$16,476

## THE CHELSEA WIRE FABRIC RUBBER CO.

MANUFACTURERS.

## MECHANICAL \* RUBBER \* GOODS,

BELTING, PACKING, HOSE, Etc.

Brewers' Hose,

Steam Hose,

Air Brake Hose,

BELTING.

Tubing, Gaskets,  
Etc.

ALFRED W. FITZ,  
Treas. and Manager.

Office and Factory : 968-974 BROADWAY, CHELSEA, MASS., U. S. A.

Mention the India Rubber World when you write.



## RUBBER-PLANTING IN MEXICO.

ON his return from a recent visit to Mexico, Major J. Orton Kerbey said to a reporter for the Chicago *Inter-Ocean*, respecting rubber-planting schemes:

"It is one of the popular mistakes to suppose rubber and cocoa cultivation may be profitably engaged in by persons with small capital. A few American land-sharks, who have exhausted their resources in Kansas, are located in Mexico, from where they are sending out gorgeously attractive coffee and rubber literature, that, to say the least, is grossly misleading. Their plan is to sell large tracts on \$5 installments per acre that are really not worth more than 25 cents.

"The cold facts about this hot land is that no American can live in those forests offered for sale as coffee lands. The terrible suffering caused by the prolific insect life, combined with fevers and other ills incident to tropical life, amounts to practical inhibition.

"Mexico is no place for a poor man or a person with small capital. The key to success in that enchanted land lies in taking our good American money over the border,—where it doubles in value, because the United States government stamp is on it,—and using this capital in the employment of the cheap native labor to produce those things that can be grown only in the tropics, and for which there is no competition in our land, such as coffee, cocoa, rubber, and vanilla, and export them to the markets of the world."

A report from Pittsburgh says that Major Kerbey has been there, stating that his visit to Mexico was in the interest of New Yorkers, who are considering the question of investing in rubber-plantations. It is stated, by the way, that Pittsburgh capitalists have invested considerable money in coffee-planting in Mexico.

TO THE EDITOR OF THE INDIA RUBBER WORLD: I am in receipt of a letter from the governor of Chihuahua informing me that there is near Santa Rosalia, in that state, a bush growing on a large tract of land which yields a kind of elastic gum similar to India-rubber. An American citizen was there for some years engaged in exporting carloads of said plant, but it is believed that he had not any success and gave up that business.

Very faithfully yours,

M. ROMERO.

Mexican Legation, Washington, D. C., July, 1895.

[THE plant referred to in the above letter from the Mexican minister to the United States, is that with which Mr. John H. Cheever, of New York, experimented several years ago, as reported in THE INDIA RUBBER WORLD for May last. The rubber-gatherer to whom the governor of Chihuahua alludes was Mr. Cheever's agent.—THE EDITOR.]

## GOVERNMENT RUBBER SUPPLIES.

CONTRACTS have been awarded as follows for India-rubber goods for the United States bureau of engraving and printing for the current fiscal year, after the customary competitive bidding:

To Holmes & Co.: 150 yards rubber cloth, 45 inches wide, at 65 cents; 150 yards, 36 inches wide, at 55 cents; 12 rubber blankets, two-ply, 26 by 18 inches, at \$1.80 each.

To Town & Brother: 20 pounds of rubber truck-wheels, 7 inches inside diameter,  $\frac{3}{8}$  inch thick,  $1\frac{1}{2}$  inches on face, at 75 cents; 18 pounds,  $7\frac{1}{2}$  inches inside diameter,  $\frac{3}{8}$  inch thick, at 75 cents.

To B. Rich & Sons: 6 pairs rubber boots, at \$2.09.

The successful bidders are presumably Washington city dealers.

## Free Want Department.

WANTED.—Position in a rubber clothing factory by a man who is capable of acting as superintendent of proofing department but who is desirous of securing any position to get a start in this country. Address, P. R. W., care of INDIA RUBBER WORLD. (July.)

WANTED.—By a chemist well acquainted with the rubber business, a position in a rubber factory. The best of references given. Address, H., care of INDIA RUBBER WORLD. (July.)

WANTED.—By a man of thirty with nearly fifteen years' experience, a position with a rubber factory or large jobbing house, can furnish best of references. Address, D, care of INDIA RUBBER WORLD. (July.)

FOR SALE.—A quantity of hard rubber turnings. S. R. Brown, Wappingers Falls, N. Y. (July.)

WANTED.—Man to take entire charge of druggist sundries department in large rubber works. Must have large experience and be perfectly competent. Address, "A" P. O. Box 1783, Boston, Mass. (July.)

WANTED.—Second hand devulcanizer in good condition, about 12 inches by 36 inches. State lowest price. Address, Devulcanizer, care INDIA RUBBER WORLD. (July.)

WANTED.—By a house manufacturing the highest grades of druggists' sundries and stationers' goods, a traveling salesman. Address, "C. R.", care INDIA RUBBER WORLD. (July.)

WANTED.—3 tons of elastic thread waste. Address with sample and price, William Somerville's Sons, 62 and 64 William St., New York City. (July.)

WANTED.—A man accustomed to the mixing and milling of rubber to go to Canada. Good wages. Address, R., INDIA RUBBER WORLD. (July.)

A COMPETENT MAN desires position as foreman or superintendent with pneumatic tire manufacturer. Can compound for tire stock if required. Address "Superintendent," care of INDIA RUBBER WORLD. (July.)

A SALESMAN thoroughly familiar with every detail of the business desires an agency or more especially a consignment of mechanical rubber goods sundries or clothing for Colorado and its surroundings. The advertiser has an extensive trade in this country and can give the highest references and bond if necessary for the faithful performance of any contract made. Address, S. J. G., care INDIA RUBBER WORLD. (June.)

WANTED.—By a firm in Great Britain, a practical man skilled in all departments of the manufacture of rubber shoes. Reply stating age, experience, present and past employers and salary expected. Address, "Expert," office of INDIA RUBBER WORLD. (June.)

FOR SALE.—Devulcanizer, 3 ft. by 12 ft. with skeleton truck 12 ft. long, nearly new and in first class condition. An upright boiler 9' by 6' with 36 2-inch tubes. This boiler was used on y 18 months and is in first class condition. Address, I. B. Kleinert Rubber Works, College Point, L. I. (May.)

POSITION WANTED.—By an A No. 1 salesman. Have sold nearly everything made of rubber and am known to the trade in twenty States. First class references. Address, "Hustler," care of INDIA RUBBER WORLD. (June.)

FOR SALE.—Two English Spreaders in perfect condition, also one rubber washer 9x18. Price reasonable. Address, J. J. M., INDIA RUBBER WORLD. (June.)

WANTED.—A salesman for mechanical rubber goods for New York City Address, "Bicycle," INDIA RUBBER WORLD office. (June.)

WANTED.—An experienced hard rubber turner. Steady position. Apply Davidson Rubber Co., Charlestown Dist., Boston, Mass. (June.)

WANTED.—Second-hand churns. State size and price. Address J. F. S., care INDIA RUBBER WORLD. (May.)

WANTED.—A position with rubber goods house, have traveled in this line for past nine years in Pennsylvania and Ohio, having good trade established, change to take place at once, A1 References Address, W. C. W. General Delivery, Buffalo, N. Y. (May.)

PARTIES wishing a select line of rubber compounds for all mechanical goods will find it to their advantage to address O. B., care of INDIA RUBBER WORLD. (Aug.)

WANTED.—A position as superintendent or foreman. Am thoroughly acquainted with the rubber business, was fifteen years with the Silvertown Rubber Co., London, England; can manufacture golf balls, wagon and bicycle tires, inner tubes and stems, and other mechanical rubber goods, having splendid compounds for all. Address W. T. D., Campello, Mass. (Aug.)

FOR SALE.—Vulcanizer 13 ft. x 3 ft. with truck and pan, tubing machine (Royle No. 1), 20x22 press, also a lathe; all new and in good order. Address A. P. Z., INDIA RUBBER WORLD Office. (Aug.)

SALESMAN, with experience east and West, wants position with first-class druggist sundry house. A 1 reference; thoroughly posted in line and with the trade. Address J. W. V. P., care of INDIA RUBBER WORLD. (Aug.)

AN engineer and machinist capable of taking entire charge of steam plant and of building all machinery for rubber factory desires position. Can furnish best of references, including last employers. Address A. A. B., care of INDIA RUBBER WORLD. (Aug.)



